

THE  
ARCHITECT  
& BUILDING NEWS

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AUGUST 11, 1950 • VOL 198 • NO 4260 • ONE SHILLING WEEKLY

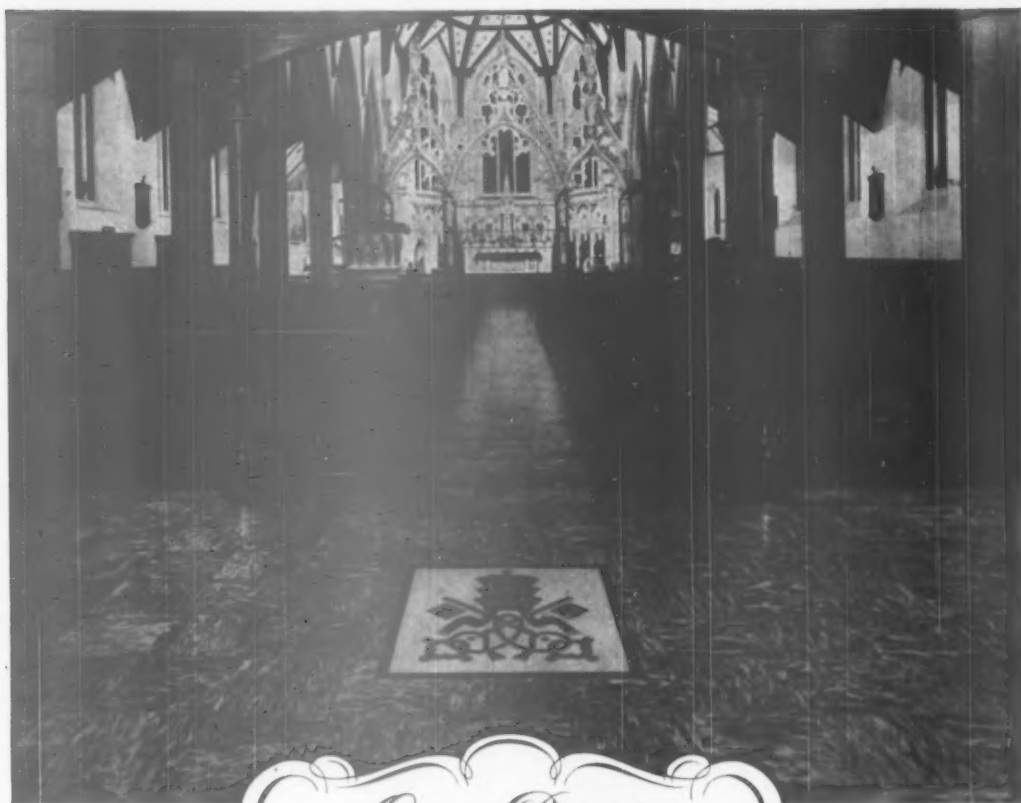


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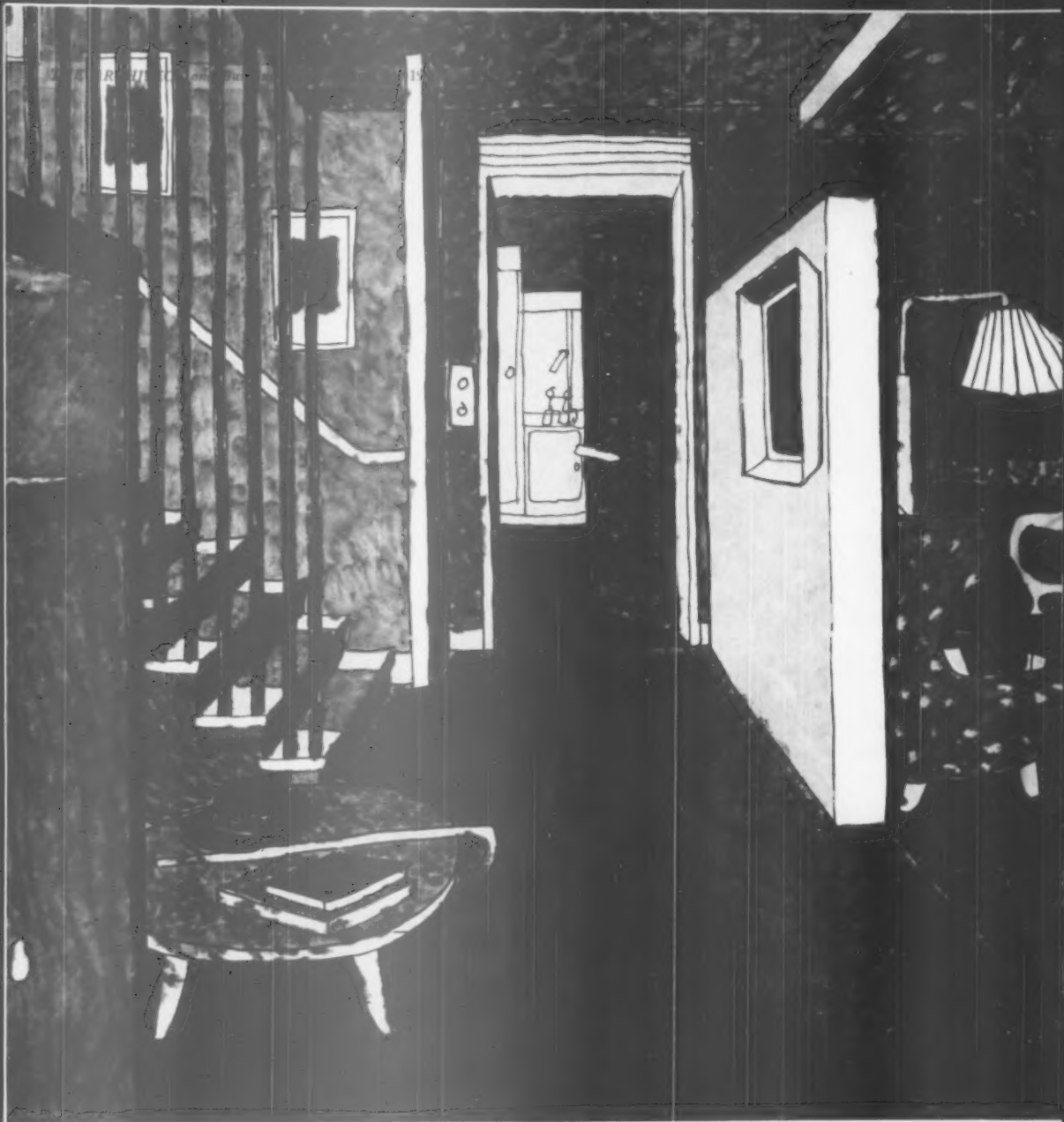
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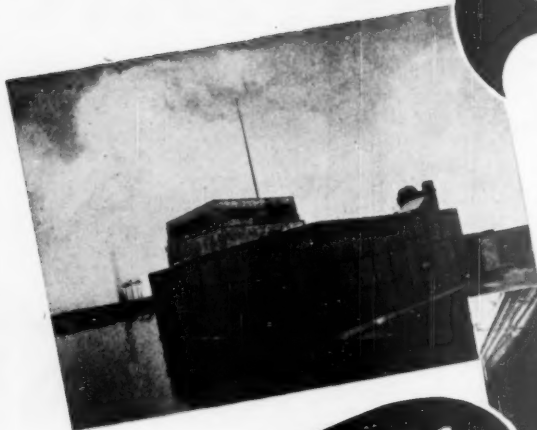
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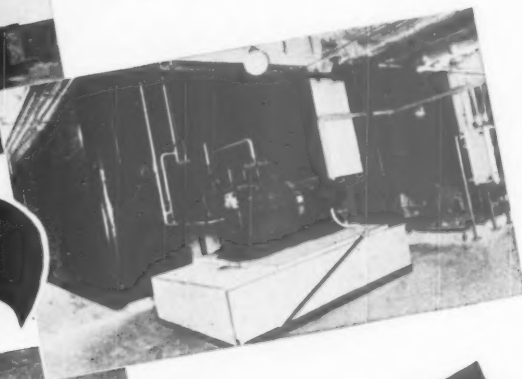
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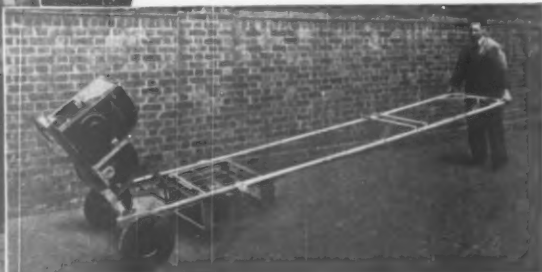
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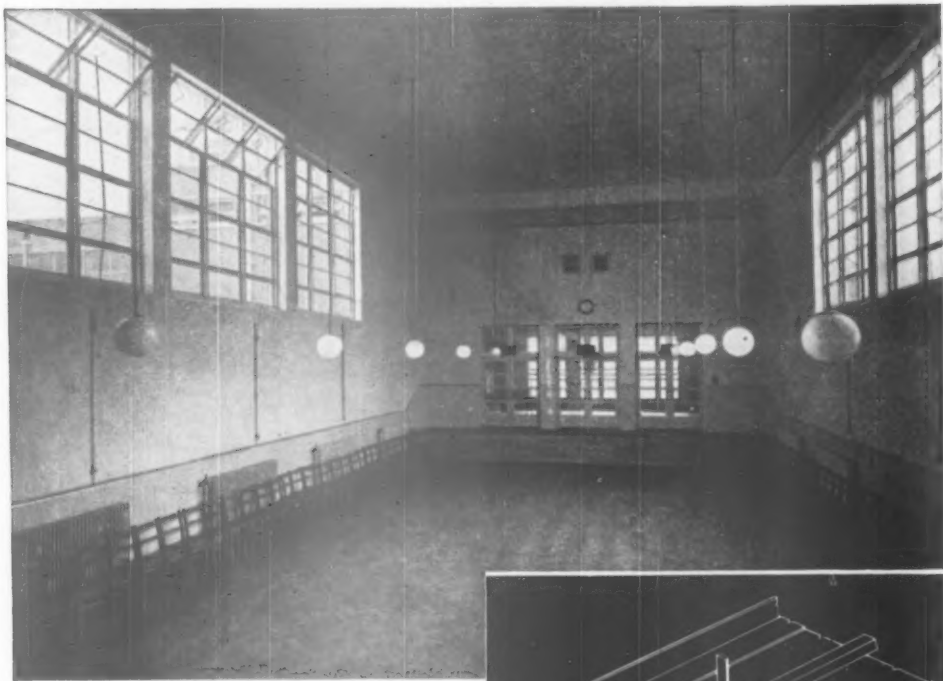
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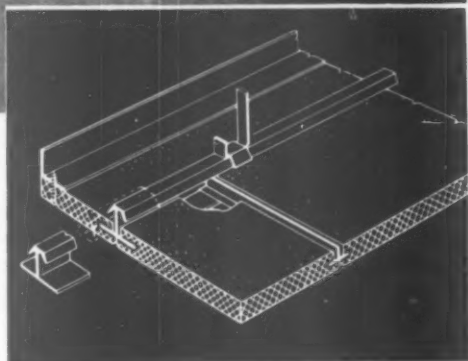


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Architects: Harrison & Cox.

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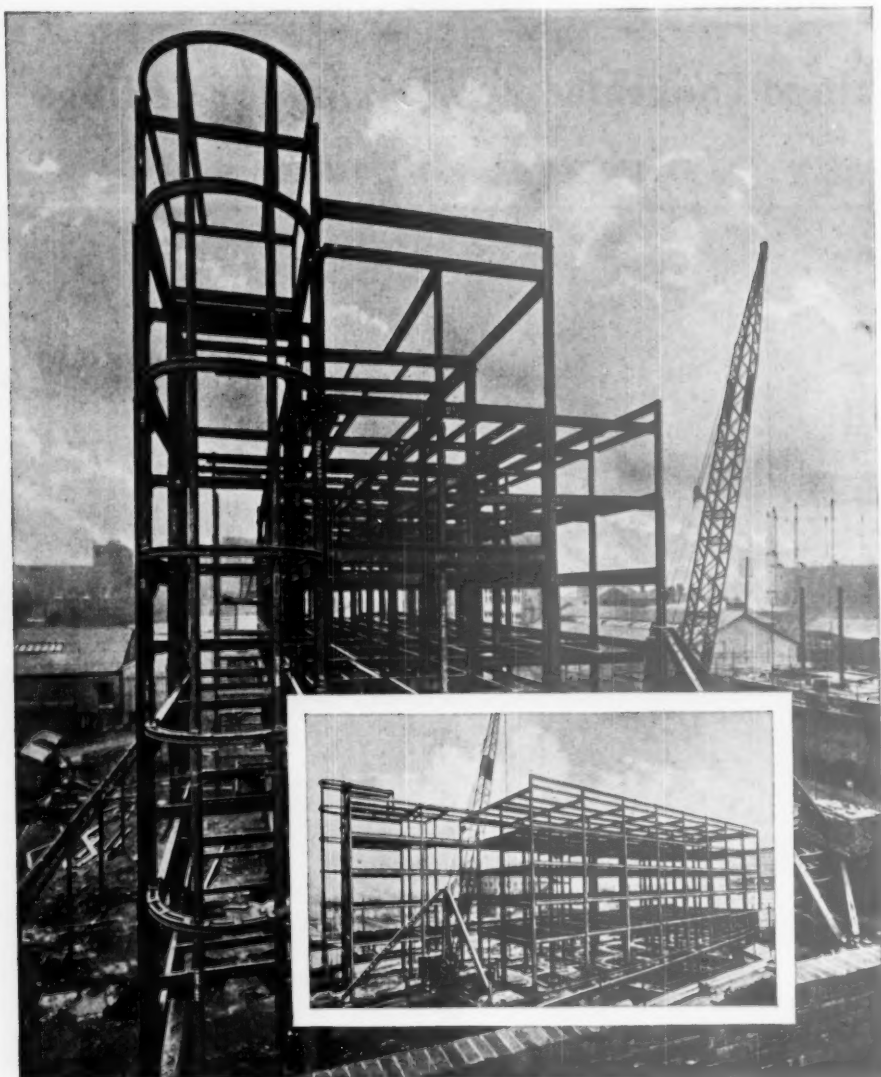
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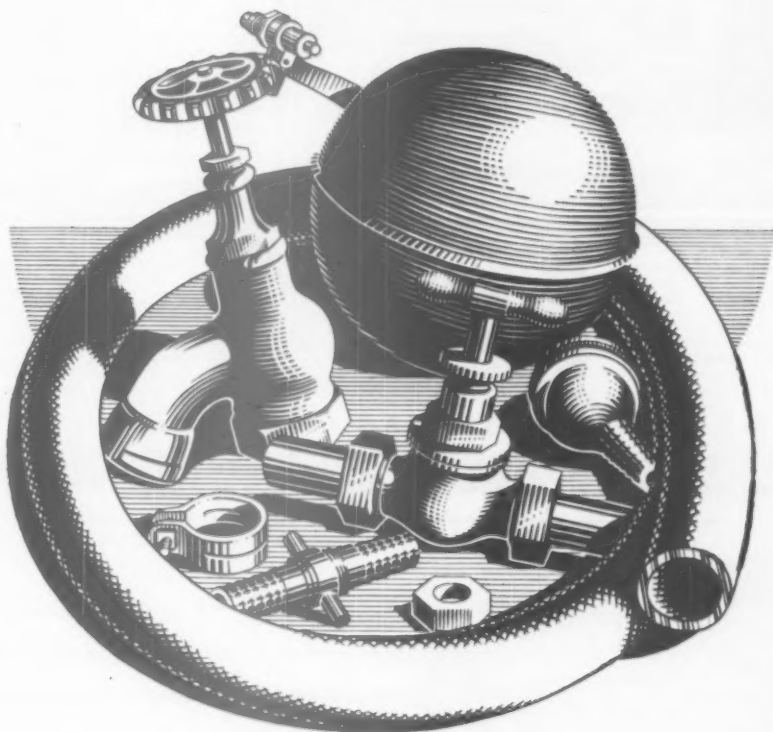
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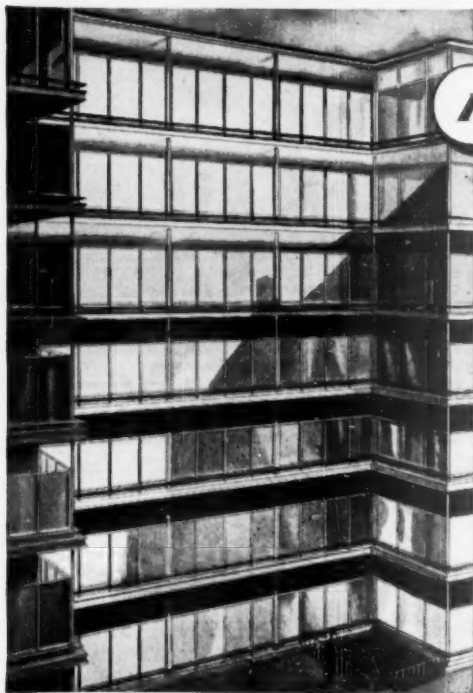
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at the seaside...**

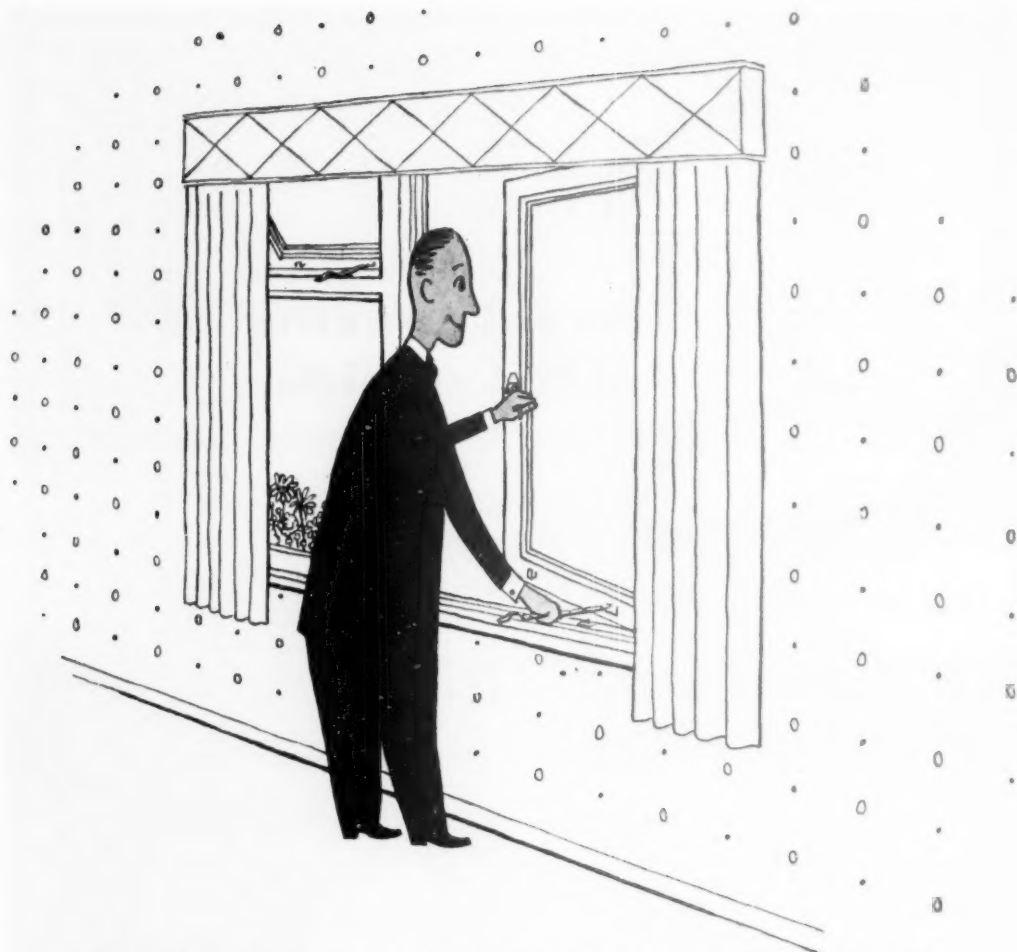
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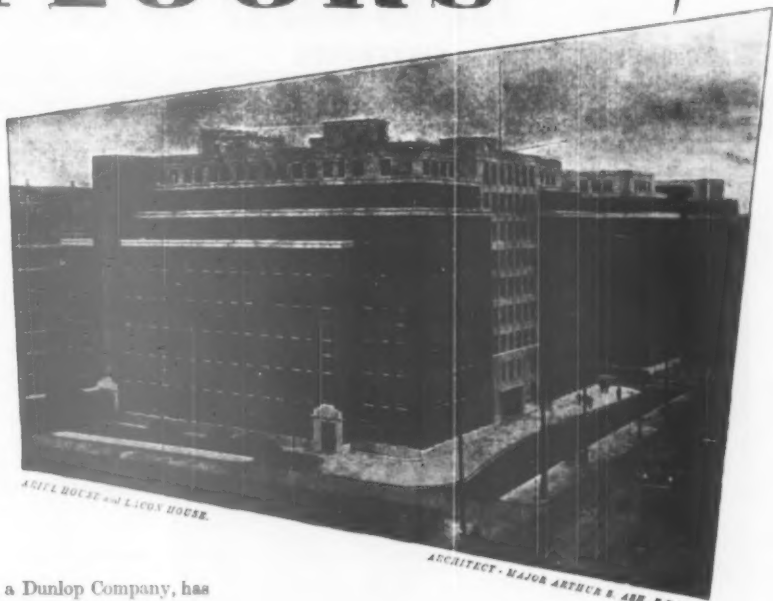
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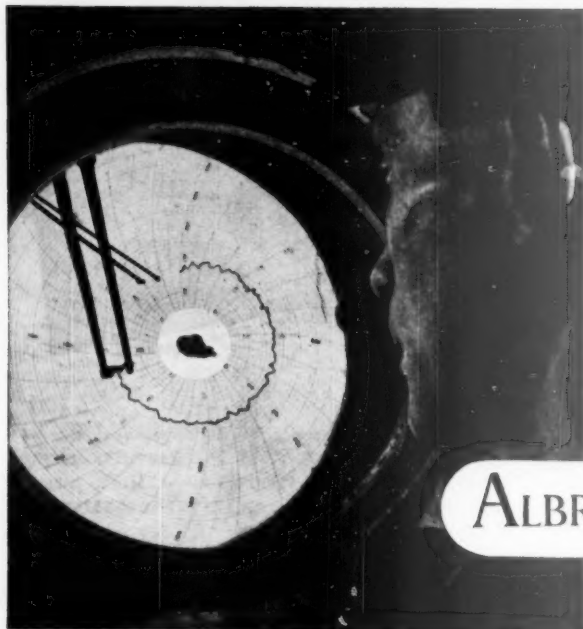
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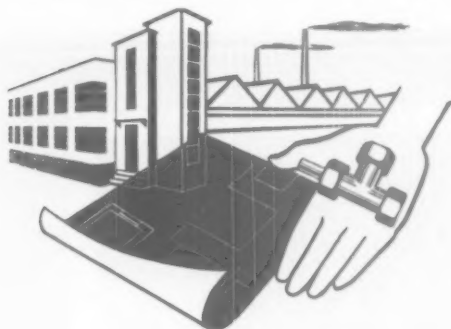
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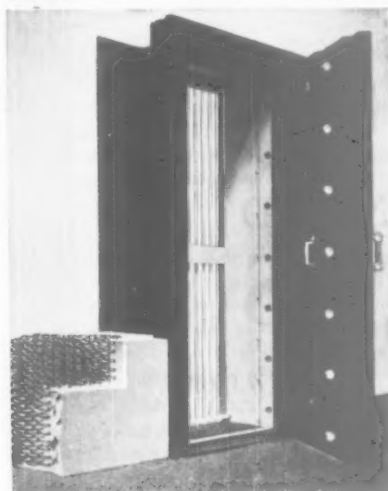
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## "GLORY HOLES"

**D**URING the discussion at the R.I.B.A. some time ago on the working of the Town and Country Planning Act, mention was made of a pet idea of Professor Holford's, namely that commercial buildings whose exuberant design made them embarrassing neighbours should be zoned in special areas called "glory holes".

This rather amusing idea is not likely to be considered very seriously by responsible bodies, but if it could be accepted, as an interim measure, might be a useful weapon in the planner's armoury, since the existing powers of control over design are not widely used to nip architectural monstrosities in the bud.

The problem is real enough. Abner recently gave an instance where a local authority was at odds with a famous firm over the siting of one of their standard shops.

Certainly the idea of areas zoned for architectural black sheep might at one stroke solve the problem of bad neighbourliness and result in some very magnetic areas where vulgarity was a virtue and sober good taste anathema.

A number of local authorities are going ahead with large blocks planned as an architectural unity in which the individual owners have a limited framework in which to express their individuality. There are also the well-known arcades and precincts, many

of them centuries old, which are famous for their attraction. But still the preponderant number of shop-owners dread above everything the risk of being overlooked or passed by, and accordingly no drum is too big for them to beat.

To these people nothing could be better than contrasting surroundings in which their own premises stand out like a dog at a cat show.

Shopping centres, of course, must have life and colour, and indeed vulgarity is preferable to dullness. What is any town without its shops? A wet early closing day gives the answer. We have the designers necessary to give shopping centres all the life and colour possible, but we are now in an interregnum which has seen the end of naiveté but in which good design is not yet universal. Therefore while the process is working itself out, a "glory hole" would be a clever device for a certain period, say twenty-five years.

The snag is would the black sheep allow themselves to be herded into the glory hole without a struggle? "Not bloody likely", as Eliza Doolittle would say.

But if a better name than "Glory Hole" were found, a word grandiloquent, orotund, like the names of exotic palaces which ennobled movie theatres, it might bait the trap—but "glory hole", no sir!

# EVENTS AND COMMENTS

## HOUSING AWARDS

**N**OW that the Ministry of Health housing awards have been announced one hears amusing stories suggesting that some councils have accepted for themselves the congratulations which should properly go to their architects. I do not mean by this that any council has actually claimed to have designed the housing, but some at any rate are preening themselves on their skill in briefing their architects. In one instance this briefing consisted of a small scale tracing of the site with a pencilled note "50" in one corner and another "semi-detached preferred" in another.

Some councils make a fair fuss about incorporating all the views of the housing committee and/or women's organisations in their schemes, and arrange for the architect to explain his ideas to them. Anyone who has witnessed this sort of thing will know that quite often there are no comments and no criticism, or where there is criticism it is confined to the colour of the tiles round the fireplace or other vital matters.

The M.O.H. requirement for a bicycle and garden store, to avoid untidy garden sheds, has proved most useful in seaside towns. Some tenants sleep in these stores while letting off the whole of the house less the kitchen, and in a few weeks net more than their annual rent. There has, so far, I believe, been no case of such a tenant offering to reimburse the Government for the subsidy on his rent.

Gardens on housing estates are a considerable problem, for whereas many tenants are expert and industrious gardeners, many are not, and make no effort whatever to cultivate their patches. The answer seems to be to keep gardens small and to use the rest of the land for letting off to the more enthusiastic tenants. This scheme has the added advantage that dad can be called in to meals and does not have to have his lunch sent up to him in a red spotted handkerchief.

The site for one of the winning schemes was bought from a man who stipulated that a screen of quick-growing trees should be planted at once to screen the expected "horrible housing." The architect advised his clients to accept this condition at once as the trees would hide the existing hideous villas from his houses.

Congratulations to all the winners and particularly to George Blair Imrie and Bartlett Boy P. B. Dunham, each of whom won two awards. I have heard nothing

about an exhibition, but I very much hope that there will be one, and perhaps a book as well.

## CITY OF BIRMINGHAM HANDBOOK

**I** SELDOM go to Birmingham and then only to the central area on business. It is not one of my favourite places, but it is only right that its citizens should be proud of it. I have sometimes quoted from the city's news-sheet, *Your Business*, a sensible journal containing much useful and interesting information. The public relations department of the Corporation has just published *The City of Birmingham Handbook*, price 3s. post free; it contains nearly 300 pages and many illustrations, and as it has no advertisements I wonder how they manage to do it at the price. The purpose of the book is, presumably, to improve the average citizen's knowledge of the administration of the city and of the services which it provides for his welfare. It covers everything from the Fire Brigade to refuse disposal, and art schools to cremation.

Each subject is dealt with by an expert and the result is a book full of information of the type sought by visiting American students of sociology. The text has many photographs of buildings of various ages, and pretty undistinguished they are. By far the best of the pictures is one of the interior of the lounge in the Turkish Bath, which seems to me to sum up the architecture of Birmingham very well. There are exceptions, of course, which include the pleasant Gothic building housing the School of Art and an interesting Lethaby building nearby. The architectural outlook for Brum should be brighter for Douglas Jones and his boys at the School of Architecture have done interesting work since the war.

Public Relations Departments turn out a tremendous amount of paper. I suppose it is all in a good cause. The danger is that the thousands of P.R.O.s feel that they have to justify their existence somehow and tend to make work for themselves.

## THE YOUNG IDEA

**C**HILDREN'S bricks are notorious as bad architectural elements. Their forms are usually debased and out-of-date, architectural philosophy has passed them by. This is odd, for one would have thought that here was an admirable opportunity for experts in Modular Co-ordination to try out their theories and in so doing to sow in the minds of the young seeds which, in due course, would bear the rich flowers of *Modulus Co-ordinatus*. However, all that is by the way. John Lloyd Wright, son of F. L. W., has, to quote the *Architectural Forum*, "brought building forms into the playroom" with a set of interlocking building blocks. I have only seen one picture of them and they look to me like a Great West Road interpretation of an American commercial idea of a bad architect's copy of a building by F. L. W.

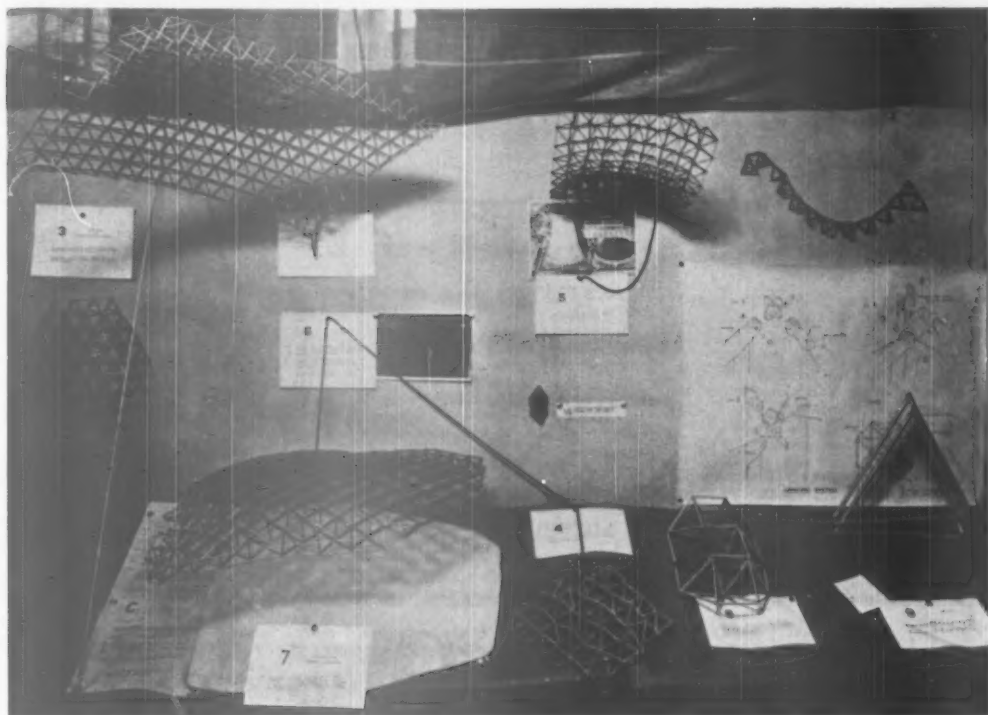
## MORE FOUNTAINS

**L**ONDON is deficient in fountains and any move to increase the volume of running, squirting or falling water is to be encouraged. The efforts of the L.C.C. (or was it the City of Westminster?) to put in order and modify the Eros fountain in Piccadilly Circus are wholly commendable, although it seems to me that they are attempting the impossible. The idea is that the fountain should be arranged to work without wetting either the onlookers, the traffic or the roadway. If it does



"Bewitched, Bothered and Bewildered"





**MODELS** of space frames at the A.A. Students' annual exhibition. Examples of other exhibits are illustrated on pages 160 and 161. In his introduction to the exhibition, the Principal, Mr. R. Furneaux Jordan said: "Every A.A. student has during his training an opportunity—although at present an inadequate one—to make things and to work on buildings. Above all, he is encouraged from the day he enters the A.A. to think of form, structure and colour as one three-dimensional unity. The imagination and intellect must be trained so that they may produce such new patterns and structures for specific functions."

none of these things it will be a poor fountain indeed. What goes up, as they say, must come down, and, if the wind happens to be blowing, the trajectory will be affected, as every Bisley marksman should know. London traffic would be all the better for a little light spraying; in fact, it would not be a bad idea to have fountains all round the Circus playing into the road in the manner of those ingenious carriage-washing contrivances on the railways. As for the onlookers, why, dammit, if they have any pretensions to being gentlemen, they should be carrying umbrellas anyway.

#### EYESTRAIN IN CINEMAS

**THE** L.C.C.'s code of minimum requirements for angles of vision from seat to screen in cinemas was based on the findings of experts in 1920. The Public Control Committee of the Council recently considered development during the last thirty years to see whether their rules should be changed. They decided to make no changes as they were informed that the distortion of the picture when viewed from the front seats was not likely to injure the sight. Various improvements in projection methods and screen texture have in fact improved the situation. It appears, however, that medical research is going on, and should modifications in the rules appear to be necessary as a result the matter will be further considered.

Theatre and cinema licences also lay down condi-

tions for adequate ventilation and this is usually based, not, it appears, on the number of air changes per hour, but on the maximum allowable carbon dioxide content of the air at peak periods. The generally accepted maximum is 10 parts per 10,000, but this has been found to be too stringent as it produces draughts, and it is now suggested by scientists that a maximum concentration of 12 parts per 10,000 is quite satisfactory and can be maintained by an efficient ventilating system without producing noticeable draughts. This may be of interest to those of you who sit in the ninepenny seats catching your deaths of cold while you wait for the licences to arrive for all those cinemas you have been designing.

#### OBSTRUCTIONS TO AERIAL NAVIGATION

**H**ITHERTO, it seems, any building or work more than 200 feet in height above ground level has been considered to be an obstruction to aerial navigation. By international agreement this has now been increased to 300 feet. Planning authorities are asked to co-operate with the Ministry of Town and Country Planning in giving various information on any such erections in their parishes.

Recently I saw a photograph of a factory near an airport. The caption explained that great care had been taken that the tower on the factory should not be an obstruction to aerial navigation (it was nothing like 200 feet high) and that a special system of lighting and



floodlighting had been installed which could, if necessary, be operated from the control tower of the airport. The next time I passed this factory I noticed that the tower had been pulled down.

#### CAR PARKS

**W**HAT is going to happen about the decreasing number of car parks in London and the increasing

number of cars? If they ever get down to building underground accommodation they will have to charge exorbitant prices if the parks are not to be a permanent burden on the rates. Perhaps it would be possible to ban private cars from central areas, making parks for them in the less expensive parts.

A B N E R

## N E W S O F T H E W E E K

### Housing Progress for June

The Housing Progress Reports presented to Parliament on Saturday, August 5 as White Papers, by the Minister of Health and the Secretary of State for Scotland show that the number of permanent houses completed in Great Britain during June, was 18,107 compared with 17,030 in May and 14,862 in April.

This brings the number of permanent houses completed during the year to date to 97,809, made up as follows: January, 14,356; February, 14,069; March, 19,385; April, 14,862; May, 17,030; June, 18,107.

The total number of houses completed under the post-war programme is now

878,302 (721,156 permanent and 157,146 temporary).

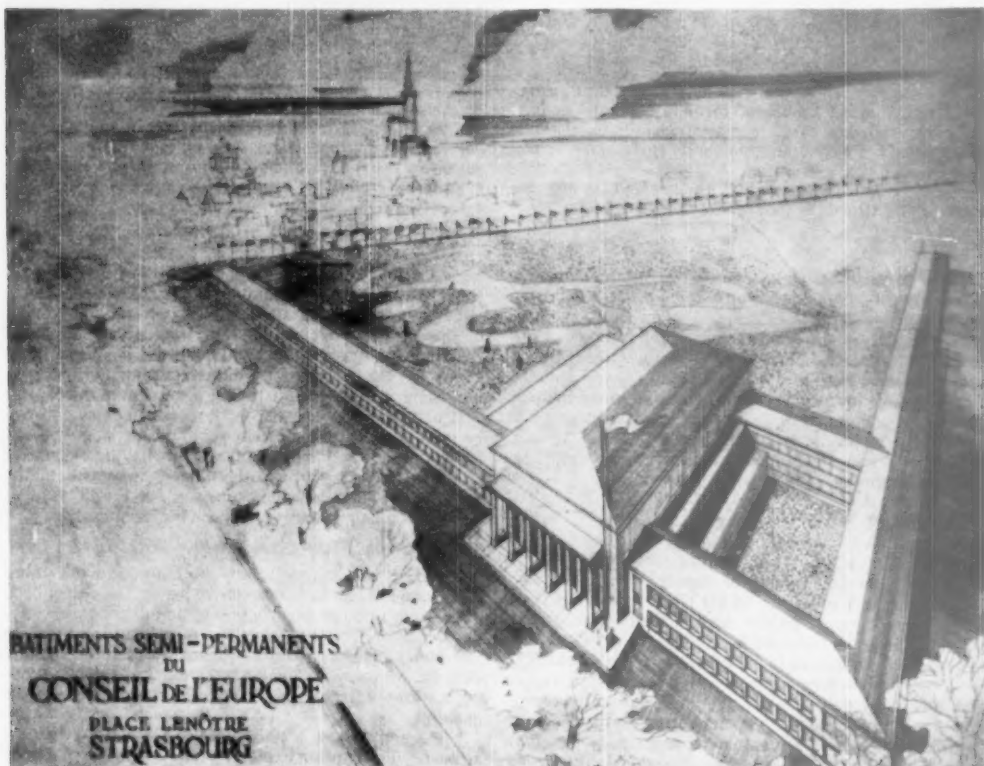
During June homes were provided by new building, repair of uninhabitable houses and conversion for 18,760 families, compared with 18,117 in May and 16,126 in April. This brings the total number of families rehoused by these methods under the post-war programme to 1,155,938. This total does not include homes provided in Service Camps or requisitioned properties.

It is estimated that at the end of June there were 233,900 men employed on the construction of permanent houses and preparation of housing sites in Great Britain. This figure does not

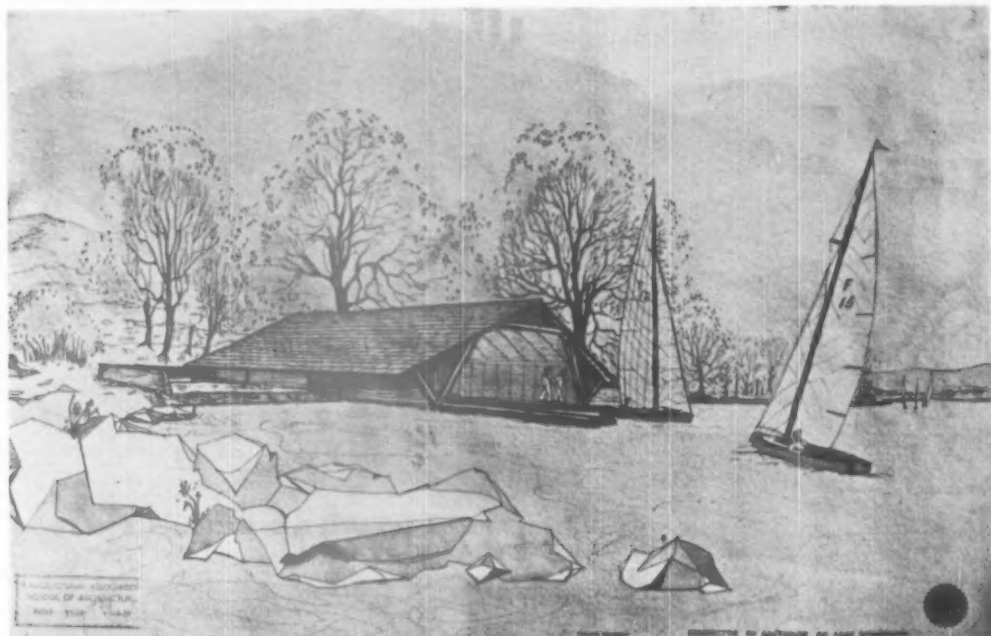
include the number of men directly employed by local authorities.

### R.I.B.A. Architecture Bronze Medal

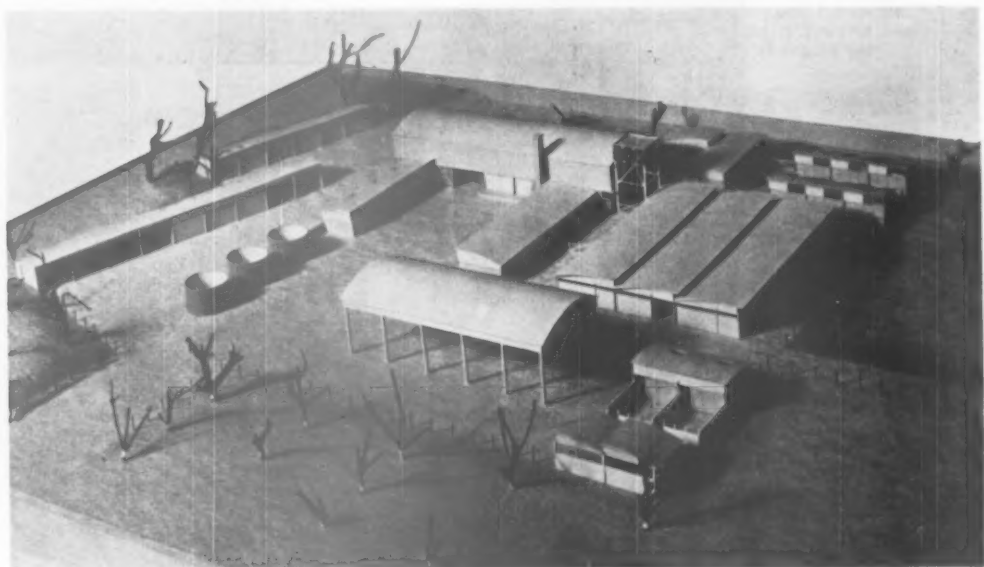
The R.I.B.A. Council have approved the recommendation of the jury entrusted with the award of the R.I.B.A. Architecture Bronze Medal in the area of the Nottingham, Derby and Lincoln Architectural Society for the period of three years ending December 31, 1949, that the award be made in favour of the Littleover County Infants' School at Derby designed by Mr. F. Hamer Crossley, F.R.I.B.A.



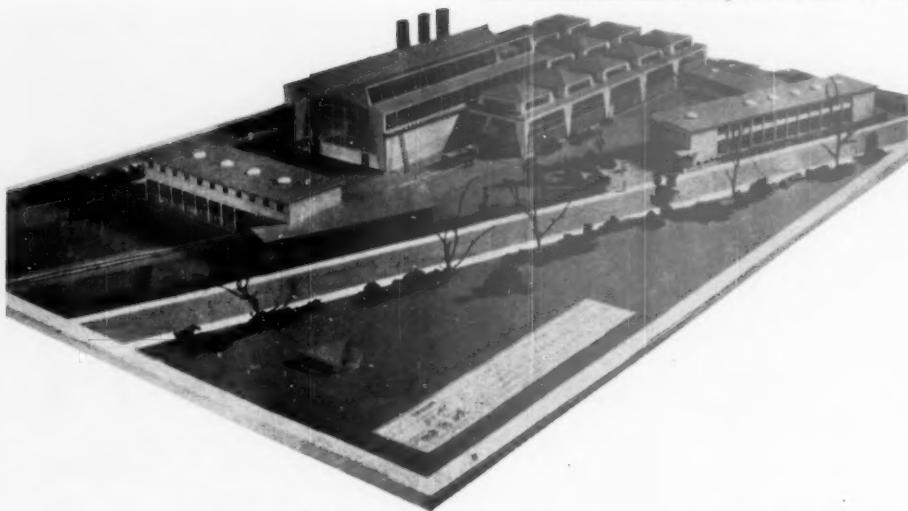
Aerial perspective view of the semi-permanent building erected in the Place Lenotre, Strasbourg, in time for the August Session of the Council of Europe.



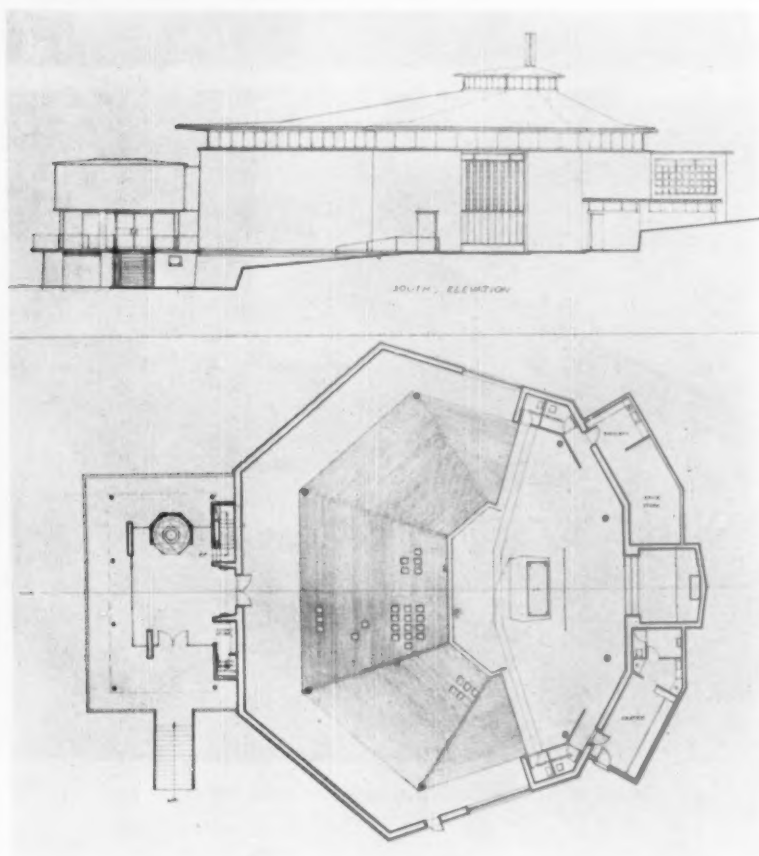
Perspective of a Boat House for Lake Windermere by William Dockeray, First Year



Model of a Dairy Farm (Standardization applied to group) by D. J. M. Bland, Third Year.

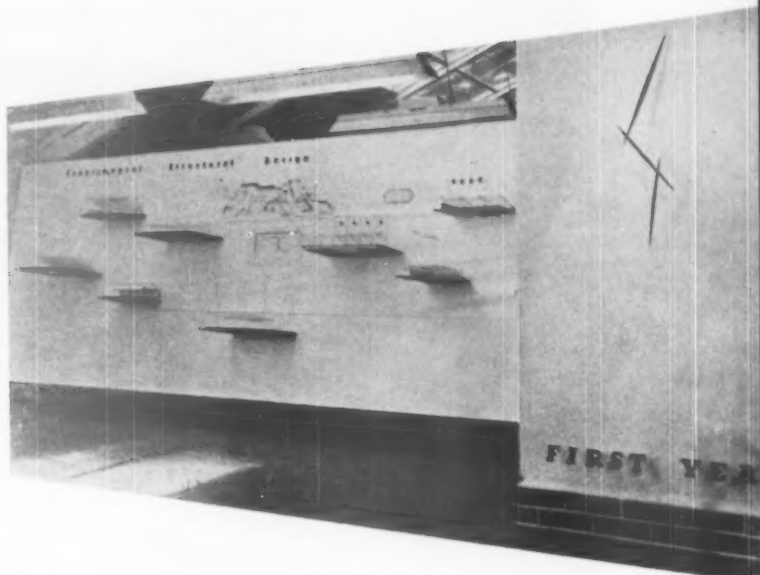


Model of an Iron Foundry for British Railways by D. G. M. Chalmers, R. Ian Chidlaw, I. H. Gibbs and J. S. Hayward, Fourth Year.



Thesis design of a Roman Catholic Church at Gt. Missenden by Sheila Gibson, Fifth Year.

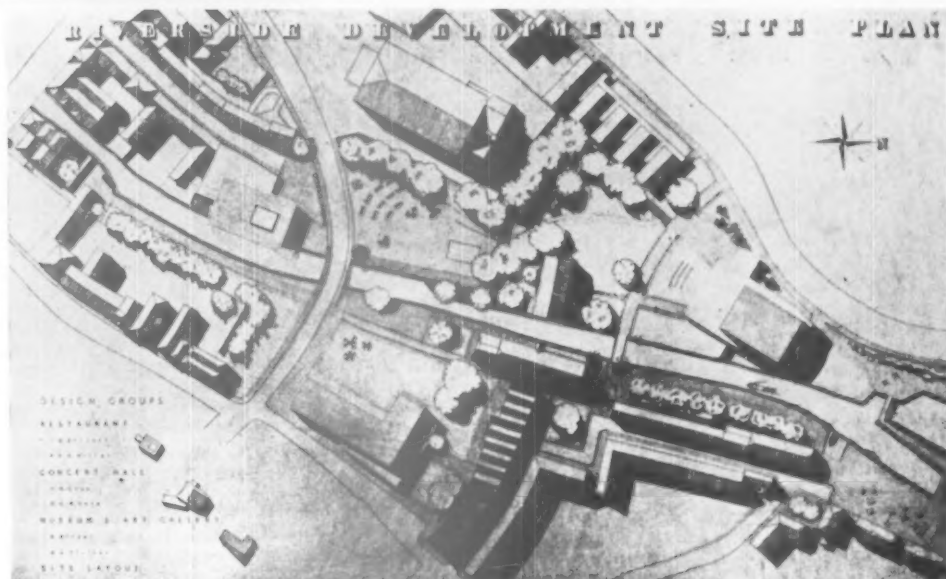
CANTERBURY  
COLLEGE OF  
ART  
SCHOOL OF  
ARCHITECTURE



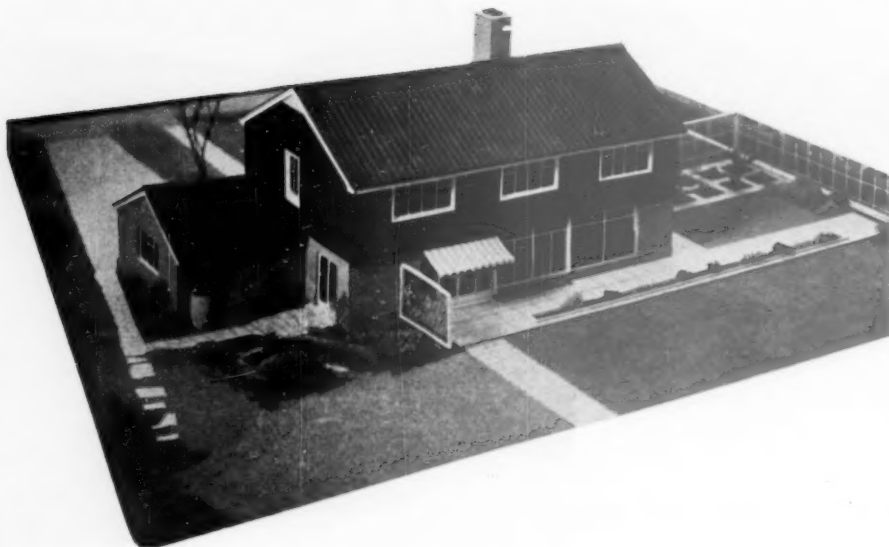
Perspective by  
C. C. Neville, 2nd year.



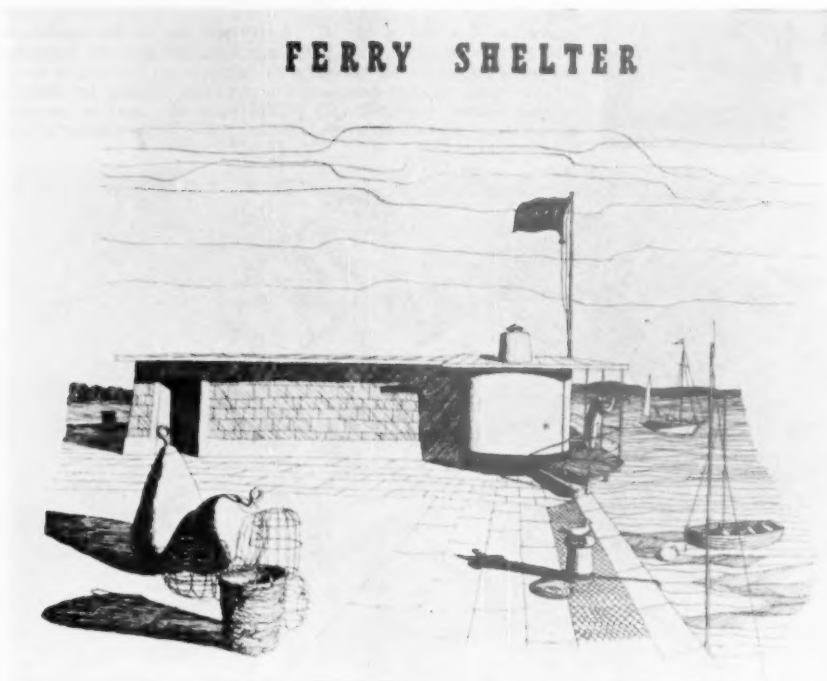
THE School is collaborating with the City Architect in work for the Festival Exhibition and the Students' Annual Exhibition was showing site models, a preliminary layout and structural designs for easily demountable pavilions. These were executed by the first year students under the direction of Mr. C. H. Wright, one of the winners of the Guildford competition. The fifth year were showing an independently conceived project for the central area improvement, opening to the public an interesting riverside area with Concert Hall, Gallery and Restaurant. In this scheme, emphasis was placed upon the need to preserve and enhance existing character while infusing new life by change of user.



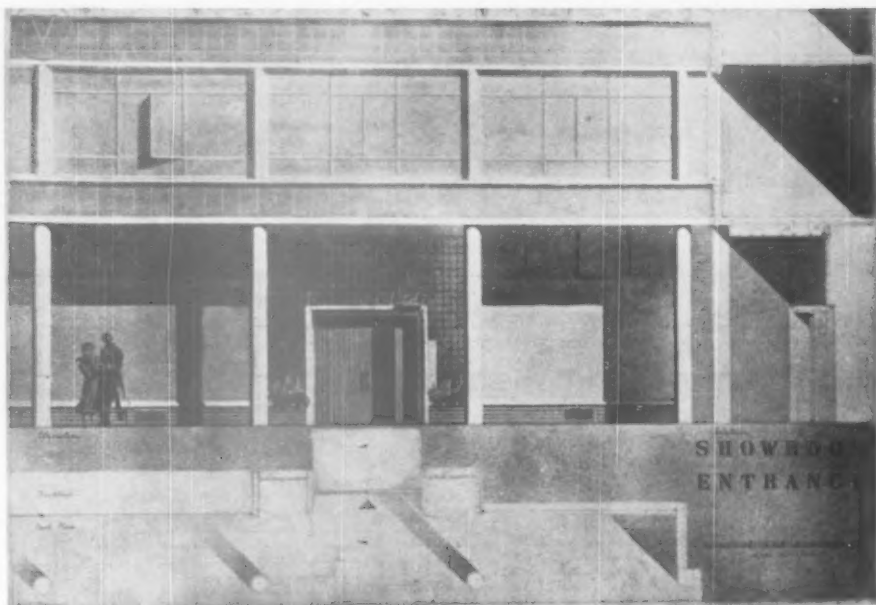
Riverside Development by Fifth Year Group: I. D. Elliott, P. F. N. Miller, M. R. Crux, D. C. W. Vane, P. Winder, A. F. Hobbs



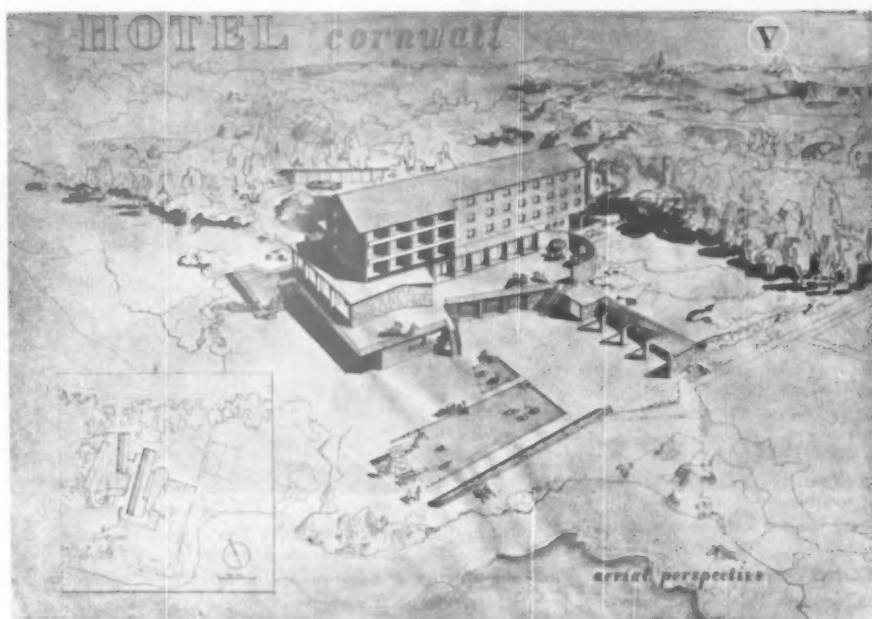
Model by F. A. Sargent, Third Year



Perspective by P. N. Prangnell, Third Year

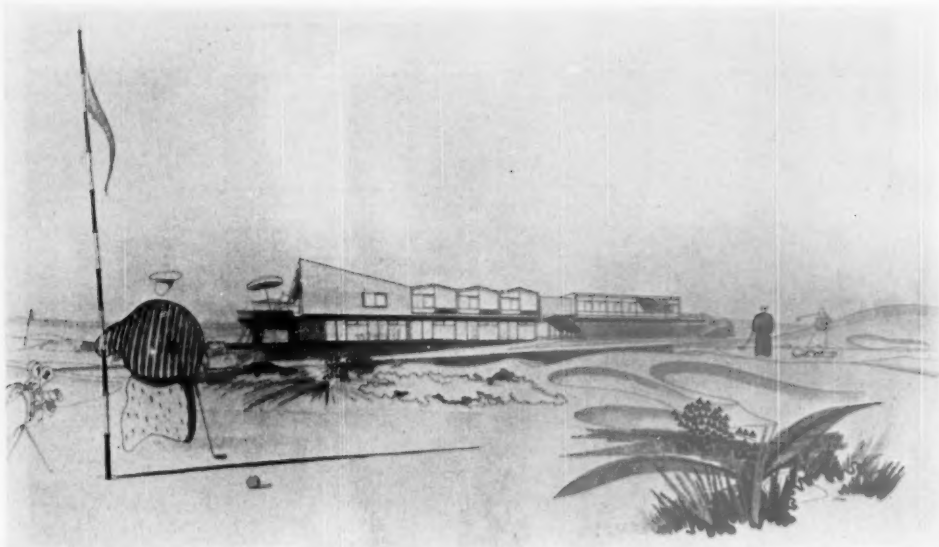


Showroom Entrance by David Gill, Fourth Year

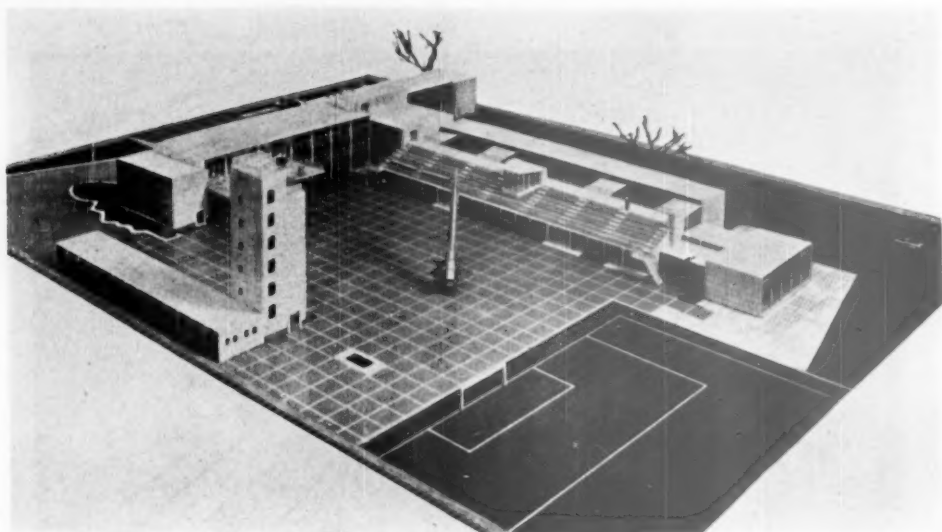


Hotel in Cornwall by J. Wiston-Lewis, Fourth Year





*A Golf Club at Sandwich by William Apps, Fifth Year*

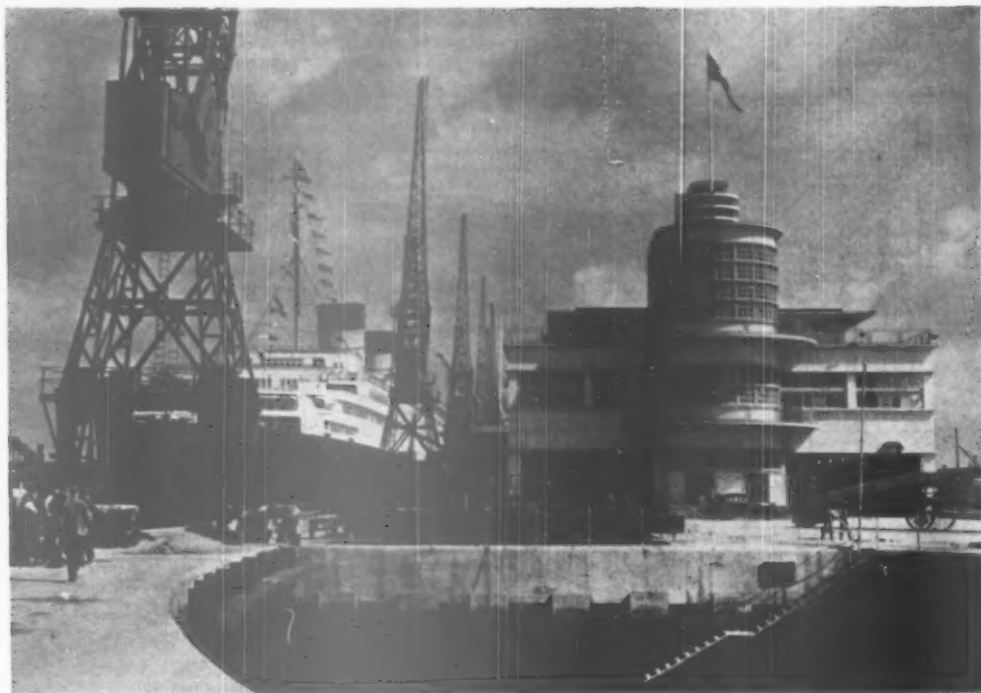


*A Fire Training School by Geoffrey Samuels, Fifth Year*

**A** STRONG ground work of traditional building practice is a feature of the early training of the student at the Northern Polytechnic School of Architecture, but he is also given ample chance to exercise his inventive powers in the modelling and construction of small buildings. The work of the third and fourth year was notable for the high standard of the working drawings. An exceptionally large fifth year resulted in a wide range of thesis subjects, many of which were thoroughly exciting.

N O R T H E R N   P O L Y T E C H N I C   S C H O O L   O F   A R C H I T E C T U R E





Ocean dock and the new terminal from South

## OCEAN TERMINAL SOUTHAMPTON DOCKS

Works carried out under the supervision of the Docks and Marine Manager R. P. BIDDLE, C.B.E., with the assistance of many officers including G. J. McHAFFIE, M.I.C.E., Docks Engineer Rtd.; J. F. JELLETT, O.B.E., M.A., M.I.C.E., Docks Engineer; C. B. DROMGOOLE, L.R.I.B.A., Architect; E. S. ELY, M.I.E.E., Electrical Engineer; B. J. DONELAN, B.E., A.M.I.C.E., Resident Engineer.

THE new Ocean Terminal has been designed to speed up passenger handling from large ocean liners. Passengers disembark direct by special telescopic gangways on to a balcony at first floor level and then pass through Waiting Rooms to the Customs and Immigration Halls. The Waiting Rooms are placed in the middle of the building and the Customs' Examination Halls at either end. Passengers descend by escalator to the ground floor for boat trains or their own cars. On top of the building is a sightseers' balcony.

The overall length of the terminal, excluding the semi-circular feature at the south end, is 1,272 ft. 6 in. long and the width at ground level over the outside walls is 111 ft. 6 in. long.

First view of the building gained by passengers on incoming ships is the view of the south end; this has been given architectural emphasis.

### CONSTRUCTION

Structure: Steel framing on piled foundations with cross sectional frames spaced at 20 ft. 2 in. centres.

The ground floor is of orthodox beam and column construction. First floor upwards is designed as a two-pin continuous Portal frame. Frames are welded except for three riveted and bolted site erection joints.

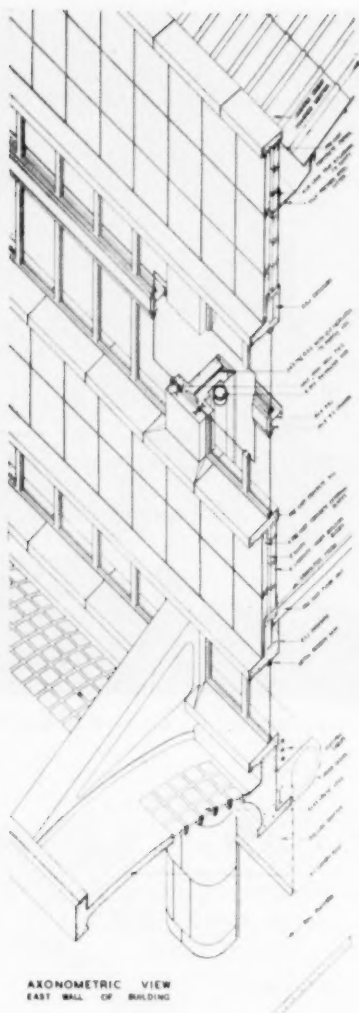
Walls: General thickness 4 in. precast concrete slabs with Portland stone aggregate, 2 in. cavity and inner walls of 4 in. "Lignacite" building blocks.

Upper Floors: Precast reinforced concrete hollow "Bison" flooring units with granolithic surface finish.

Windows: Generally pressed steel welded construction, galvanised after manufacture.

Roof Covering: Asbestos cement combined sheeting giving a corrugated external and flat internal finish. Aluminium glazing bars are used for the roof glazing.

Two expansion joints are provided in the length of the building, one at each end of the junctions between the Waiting Hall and Customs. At each end of these joints the main cross sectional framing is "afloat" longitudinally, expansion taking place in it from both sides by means of slotted end connections in the floor beams, purlins, etc. Bronze sliding plates cover the



AXONOMETRIC VIEW  
EAST WALL OF BUILDING

Joints in the concrete floors and flexible copper strips those in the precast block walls. Aluminium cover plates perform a similar function in the roof glazing.

Internal finishes in the Customs' Halls is mainly paint on structural members and cladding. In the Waiting Rooms, veneers have been used extensively. Sapelli, Canadian Way Birch and Eucalyptus Burr are used extensively in the first class Waiting Hall, while in the Cabin Class Waiting Hall, Bleached Walnut and Teak are used for the general decorative treatment of walls.

Both waiting rooms have a suspended ceiling of fibrous plaster concealing the roof members and ornamental laylights in the centre of the ceiling. Tungsten and fluorescent lighting is used for artificial illumination and air conditioning is thermostatically controlled.

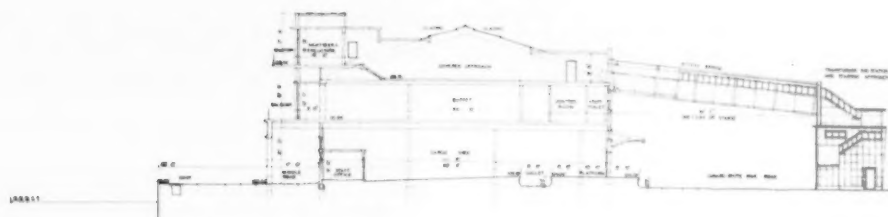
#### GENERAL CONTRACTORS—STAVERTON BUILDERS LTD.

##### MAIN CONTRACTORS

Allen West & Co. Ltd.—Switchgear. Ardent Acoustical Laboratories Ltd.—Public Address System. Frederick Braby & Co. Ltd.—Customs Tables. Cargo Fleet Iron Co. Ltd.—Constructional Steelwork. English Electric Company Ltd.—Internal Lighting. Customs Halls. Gent & Co. Ltd.—Electric Clocks. Hammond & Champness Ltd.—Lifts. J. & E. Hall Ltd.—Escalators. Maple & Co. Ltd.—Furnishings and Decoration, Lighting, Heating, etc., to Waiting Halls. Pre-Stressed Concrete Co. Ltd.—Approach Bridge. Sovex Ltd.—Baggage Conveyors. Structural & Mechanical Development Engineers Ltd.—Passenger Gangways. West's Piling & Construction Co. Ltd.—Foundation Piling.

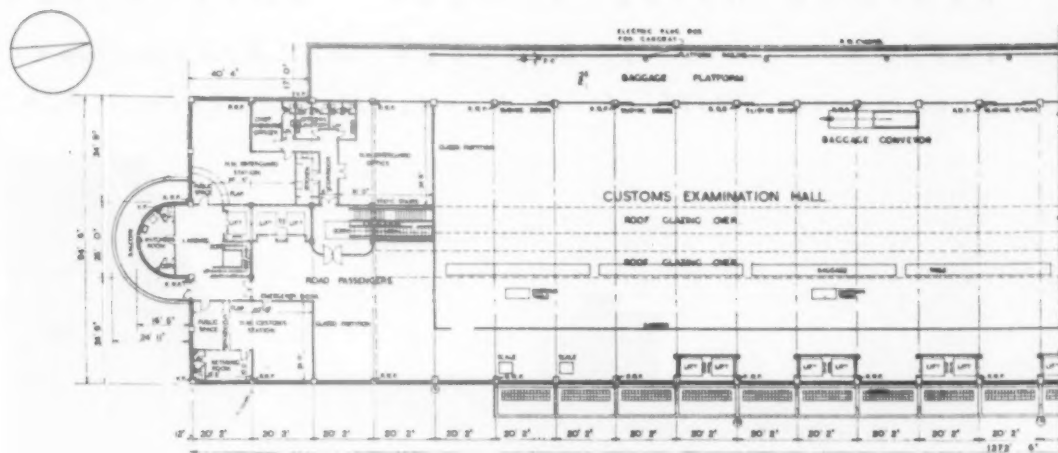
##### SUB-CONTRACTORS

Asphalt Floors—Rock Asphalt Co. Ltd. Crush Barriers, Railings, etc.—Gardiner Sons & Co. Ltd. Faience to South End Tower—Shaws Glazed Brick Co. Ltd. Floor and Wall Tiling—Carter & Co. Ltd. Flush Doors—Bryce White & Co. Ltd. Glazing—South Feature—Haywards Ltd. Gutters and Architraves—G. A. Harvey & Co. Ltd. Hydraulic Machinery—T. H. & J. Daniels, Ltd. Illuminated Direction Signs—Straight-Lite Reflectors Ltd. Lettering—External and Customs—Southern Signs Ltd. Lighting—Phoenix Electrical Co. (London) Ltd. Waiting Halls: Thorn Electrical Industries: Gangway Lighting. Plastering and Gravellic floors—A. C. V. Telling (Southern) Ltd. Plumbing—Joyce Bros. Ltd. Pre-cast Floor Slabs—Concrete Ltd. Quay-side Doors—Goulding & Ansell Ltd. Roller Shutters—John Booth & Sons (Bolton) Ltd. Roofing—Roberts Adlard & Co. Ltd. Roof Glazing—W. H. Heywood & Co. Ltd. Smoke Extraction Plant—Supervents Ltd. Steelwork and Balustrades—E. C. Blackmore Ltd. Supporting Steelwork—Waiting Halls—E. Webb & Co. Ltd. Terrace Paving—Art Pavements and Decorations Ltd. Ventilating and Heating—Waiting Halls—Viaduct Heating & Ventilating Co. Ltd. Waterproofing to R.C. Canopy—Bryce Martin Ltd. Wall Blocks—The Blokrete Co. Ltd. External: Lignacite (Fordingbridge) Ltd. Internal: Windows—Henry Hope & Sons Ltd. Window Glazing—Faulkner Greene & Co. Ltd.

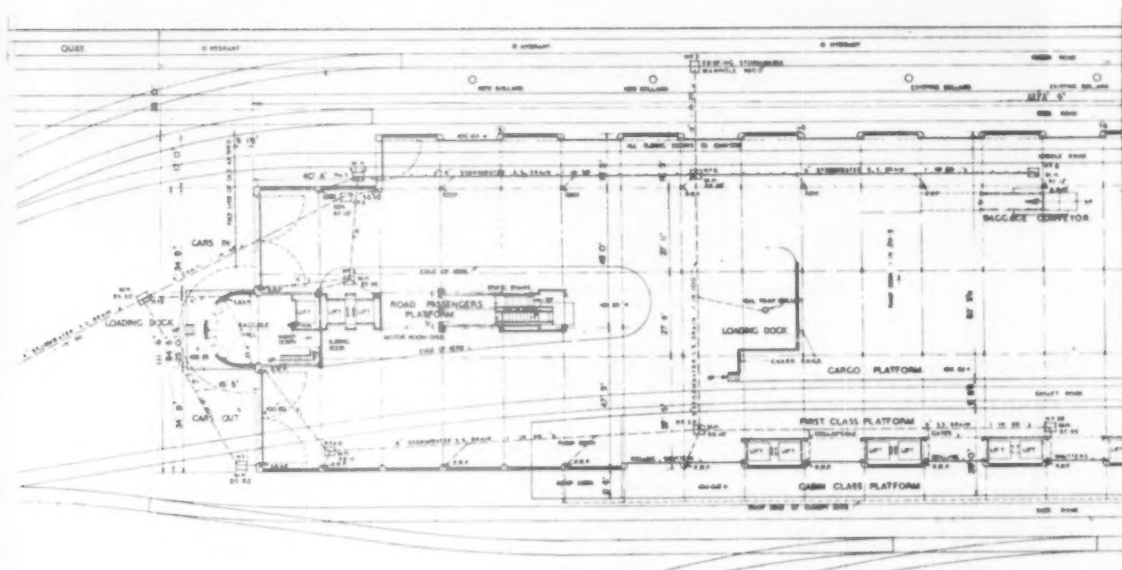


TYPICAL CROSS SECTION

NEW PASSENGER TERMINAL



FIRST FLOOR PLAN, SOUTH END PORTION



GROUND FLOOR PLAN, SOUTH END PORTION

*In general the North end portion of the terminal repeats the South end portion, without the semi-circular feature. Waiting rooms, etc., occupy the centre portion on the first floor which is brought forward on the quayside to form enclosed verandas at first- and second-floor levels.*

OCEAN DOCK, SOUTHAMPTON

**BEDFORD DRIVE SCHOOL, ROCK FERRY**  
**for the County Borough of Birkenhead**  
**Architects: Willink & Dodd, M.A., F.F.R.I.B.A.**



*General view looking towards Assembly Hall and Main Staircase Hall.*

### **Description**

**T**HIS school, the first of a scheme comprising separate junior and secondary schools to be built adjoining one another, is sited in a large residential area. Much of the housing in the vicinity is municipal housing, a proportion of which has been built since the war. The development of the area has led to a demand for adequate schooling facilities and the scheme when complete will enable pupils to complete their school education within the confines of the one site.

The site area measures approximately  $\frac{3}{4}$  acres, one acre of which is being grassed, and there are extensive paved playgrounds. This school, the first of the two projects, will cater for infants and juniors and is designed as a single-storey build-

ing with a two-storey unit incorporating the administration block and the main assembly hall.

The single-storey layout meets satisfactorily the problem of present-day school construction—to get as much daylight as possible evenly distributed within the classrooms. The construction employs a Portal frame of rigid steel beams, the vertical members being enclosed on the outer wall side in sheet steel cladding to form mullions between the windows.

The windows extend from sill level to a continuous R.C. canopy to prevent glare, at approximately 8ft. 6in. above floor level. Above this canopy glass blocks are built in to ceiling level and the outside walls are thus completely glazed from sill level to ceiling.

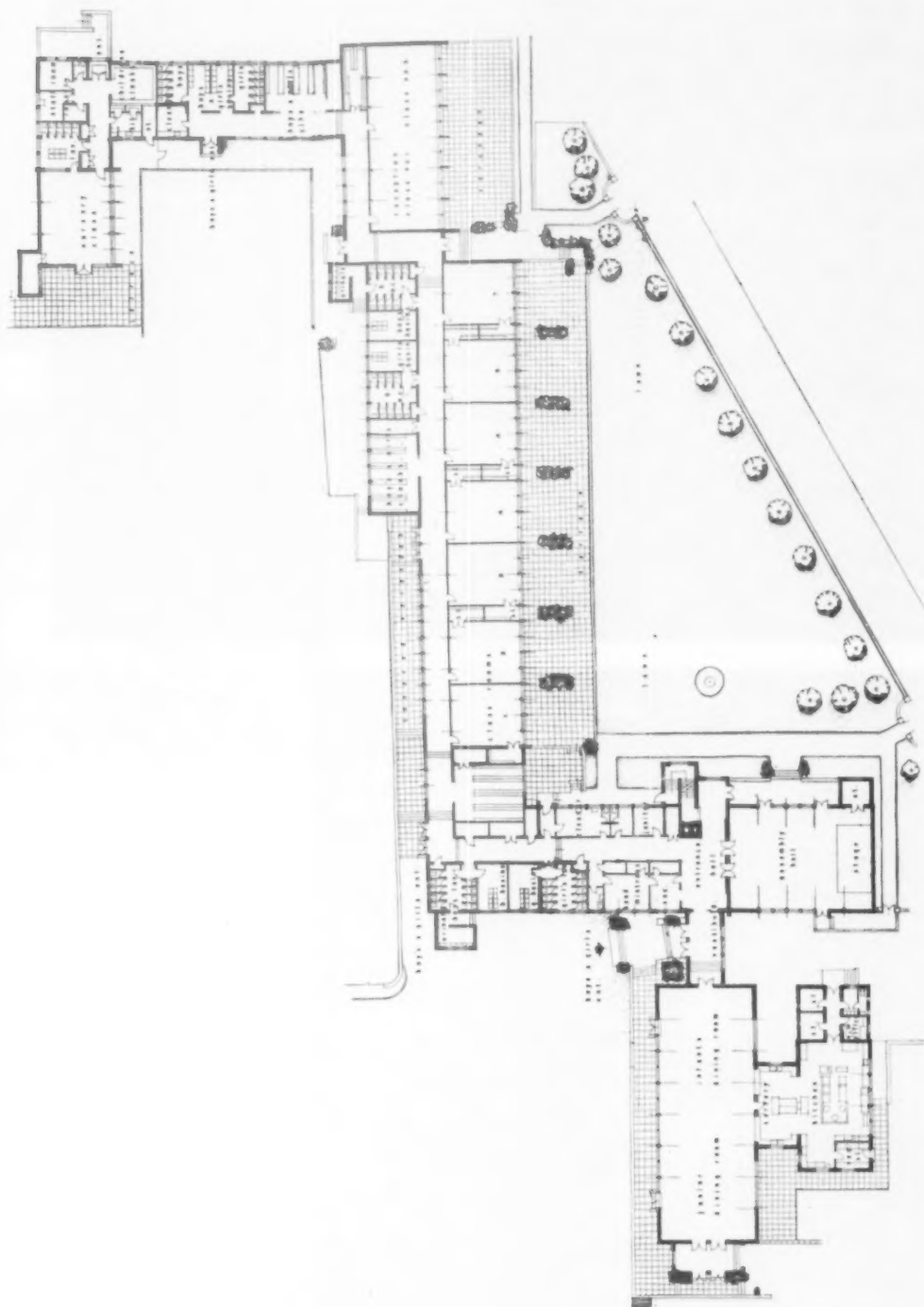
On the corridor side patent glazing is set into the bent Portal frame between the ceiling and corridor roof level, providing natural light to the internal area of the classrooms.

Construction of panel walls is of 11in. brick with Ravenhead Golden Brown facings and gable walls are 14in. thick faced in a similar manner.

Truscon Precast Units are used for roof construction generally with a layer of Tentest boarding on top laid on a prepared screed and waterproofed with 3-ply bitumen felt having a green gritted finish.

Lavatories, cloakrooms and kitchen floors generally are of quarry tiles and the classroom floors are finished in buff Aranbee composition flooring  $\frac{3}{4}$ -in. thick laid on  $\frac{1}{2}$ -in. screeding.

Construction has taken 22 months from start to completion.



plan of the Infants' Primary School



Above: Typical corridor with dome glass lantern lights.



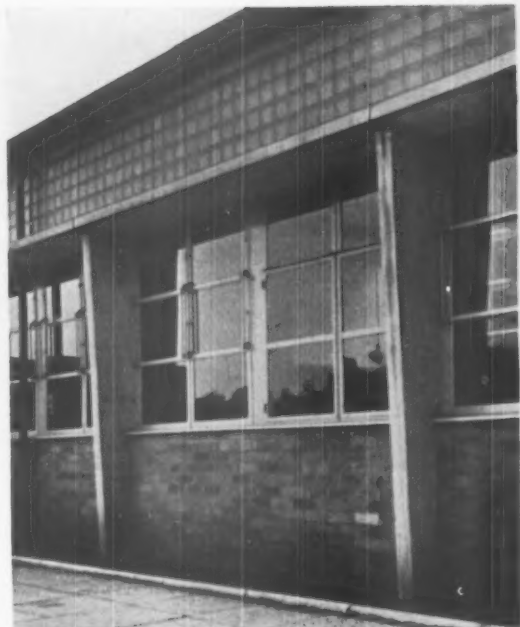
Left: A view of pupils' lavatory.

B E D F O R D  
D R I V E  
S C H O O L  
R O C K F E R R Y





Progress photo of classroom taken 15.3.49

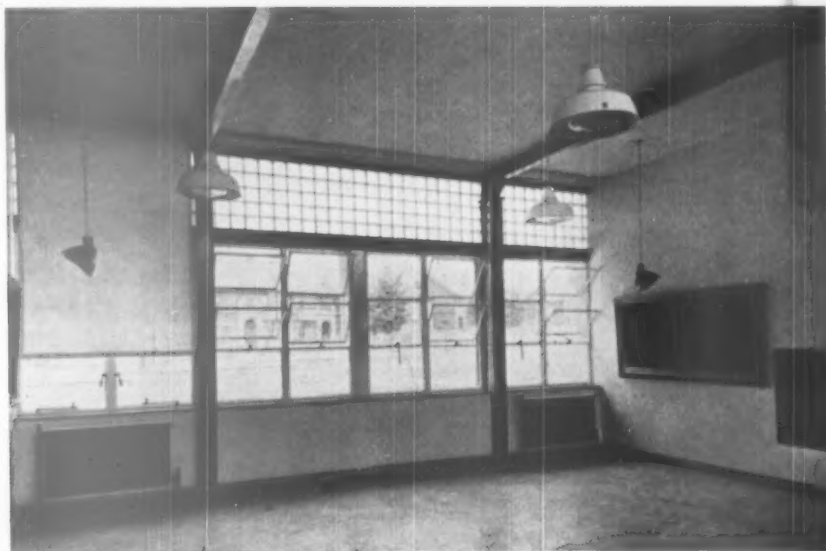


Classroom exterior, showing Portal frames enclosed with sheet steel on outer wall side to form mullions between windows

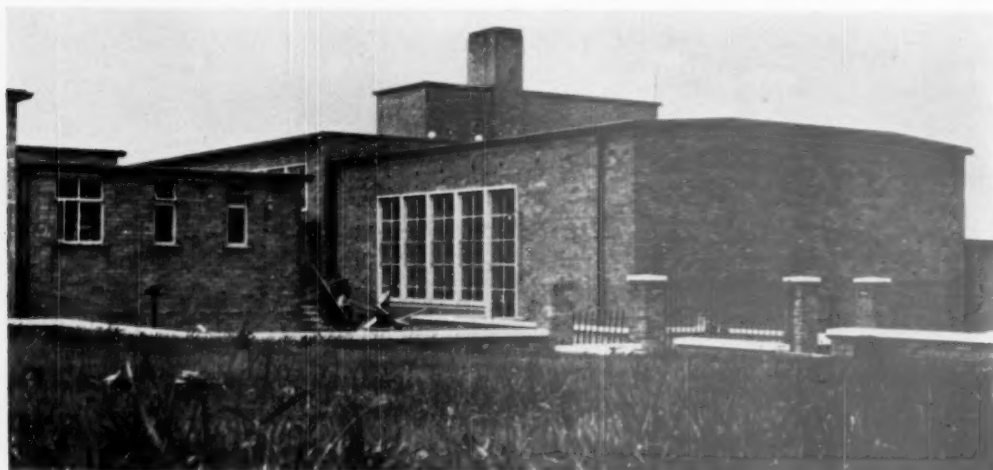


Detail of fenestration, corridor side of classroom

Right: Typical Classroom

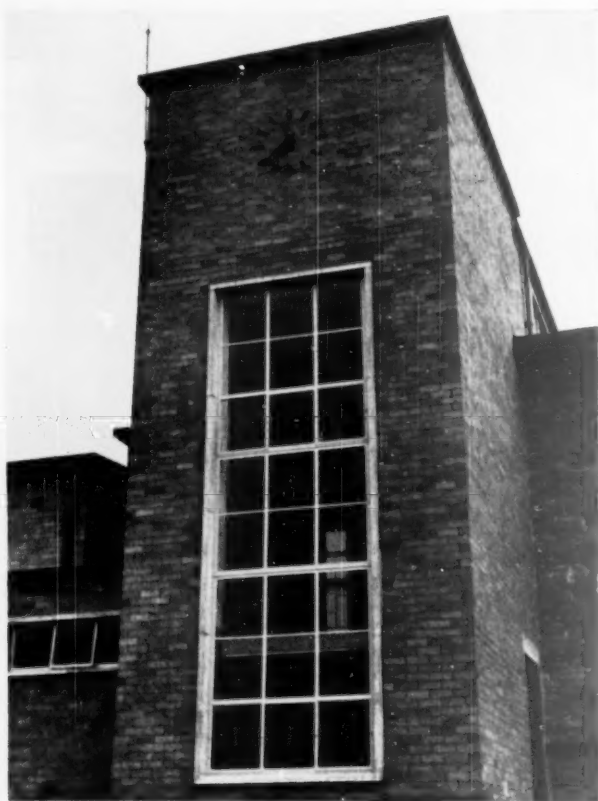


Architects:  
WILLINK & DODD  
M.A., F.F.R.I.B.A.



The Assembly Hall

Main Staircase block and Window



CONSULTING ENGINEERS: HURST,  
PEIRCE & MALCOLM, M.M.I.C.E.

GENERAL CONTRACTORS: LLOYD &  
CROSS LTD.

#### SUB-CONTRACTORS

Heating—Hot Water and Electrical Work.—  
Messrs. Matthew Hall & Co., Ltd.

Steelwork—Messrs. Ed. Wood & Co., Ltd.

Windows and Metal Trim—Messrs. Henry  
Hope & Sons, Ltd.

Precast Flooring and Roofing Units—The  
Trussed Concrete Steel Co., Ltd.

Artificial Stone—Messrs. Ferroconcrete, Ltd.

Blinds—Messrs. J. Avery & Co., Ltd.; Messrs.  
Dix Bros., Ltd.

D.P.C. and Roofing—Messrs. D. Anderson &  
Son, Ltd.

Glazing—Messrs. F. Wilkinson & Co.

Celotex Ceilings—Messrs. W. F. Hollway Bros.,  
Ltd.

Flooring—Messrs. Korkoid Decorative Floors,  
Ltd.; Messrs. Rowan & Boden, Ltd.; Messrs.  
R. W. Brooke & Co., Ltd.

Tarmacadam Surfacing—Messrs. Shepherds  
(Rochdale) Ltd.

Insulation—Messrs. Ashby Warner & Co.

Asphalting—The Menchel Asphalt Co.

Clocks—The Synchronomatic Time Recording  
Co., Ltd.

Gates and Railings—Messrs. Quiggin Bros., Ltd.

Facing Bricks—The Ravenhead Brick Co., Ltd.

Common Bricks—Messrs. Barker & Brisco,  
Ltd.

B E D F O R D   D R I V E   P R I M A R Y   S C H O O L

# How to Learn Building Construction

DISCUSSIONS amongst junior members of an office staff can be most enlightening at times. I am not only thinking of the discussions on the boss, his good points and shortcomings. I recently listened to a discussion on the difficulties of learning building construction. From the talk it appeared that the art of building construction was a mysterious science. It might have changed since I went to building construction classes twenty years ago, but has it changed as much as that? I doubt it.

Do not look upon building construction as an intricate science, the grasping of which is only mastered by a select few. It is nothing of the sort. To my mind, if you look upon construction as applied commonsense you should grasp the fundamentals in no time. If you persist in treating it as a secret art you may have difficulty. There is a logical reason for the various methods of construction in any building, and if you can grasp the logic, or, as I have said, the commonsense of construction, you should have no fear in connection with this subject.

Why are you learning construction? Obviously you will say, "So that when I have designed a building I can also construct it". I agree, but I would hasten to add that you, as a student, are learning construction to satisfy the examiners that you should know sufficient about the subject to pass an examination. Whether you agree or not, the two aspects of construction are in certain respects slightly different. Examination building construction is not always the same as you find on a site. As you will have to satisfy the examiner before you can construct a building of any size, let us consider how to learn construction for examinations which I hope will assist you when you come to build yourself.

I would suggest you make a series of study sheets, foolscap size, so that they can be bound together in a loose leaf book. By study sheets I mean one or more sheets dealing with a particular subject, for example: two sheets could cover double hung sash windows; one 1/2-inch details; and one sketches of details.

In the first instance, I would be tempted to take a small domestic building and prepare individual details from the drains to the roof. If you have taken a sketch design and worked it up you will find it far more interesting than if you took isolated parts of an assumed building.

I found the easiest and most instructive way of preparing my study sheets was to contact an architect who had a thousand pound house at the initial building stage. A thousand pound house twenty years ago was looked upon by many a provincial architect as quite a nice commission in the domestic field. He would then, and I do not suppose architects have changed much, allow you to see how the house evolved from the sketch plan stage to final working drawings.

Visit the site at least twice a week. Once, when the workmen are there, so

that you can ask the whys and wherefores from the Clerk of Works or foreman; in fact so that you can watch how it is put together. It is not only how a thing should be constructed that matters, but also how the building is actually constructed on the job. A notebook is handy.

Your second visit should be when the site is free from workmen. You can then thoroughly enjoy yourself studying each little item without feeling everyone is watching. Then, I would suggest, is the time for you to take your sketch pad and make sketch notes of the various details. When you get back you can then re-draw them, that is, if they need drawing out again, on to your study sheets.

Date your sheets and they will in time form a very interesting record. If you like to add photographs at the back of the volume, well and good, but do not use the camera as a lazy alternative to making sketches on the site.

There is a use for a camera on a building site, particularly when the men are working, and that is when they are doing certain actions or mixing various materials, or again when certain plants are being used. The photographs taken at these periods will help you with your specifications. You will then be able to visualise the various actions which give you a clue to the materials being used. I can well remember a raw student forgetting to put sand in an examination specification dealing with concrete. If he had a photograph of the operation of the mixing of cement and sand, this simple but vital omission would have been immediately visualised from his action photograph.

You will find it is the small things which you forget, the things which you know perfectly well at any normal time but which somehow you forget to put down on the examination paper.

You may say it is all very well preparing study sheets but this does not make a sufficient imprint on the brain. Perhaps not, but here are two further tips I found handy. If you can find a friend or fellow student who is likewise interested in the subject, backs of envelope competitions can be very helpful. One of you sets the question, for example, a sketch section through an eaves and wall head; the other, there and then, sketches it on the envelope back. Income tax demands are best for this purpose, they can be thrown away afterwards. By this method you do get into the habit of learning the components of any particular part of a building without the drudgery of carefully drawing it out by the tee-square and set square. Add a few sizes so that you know them if and when you have to draw them to scale.

The second method I found equally useful was to get a roll of detail paper and with a very soft pencil, if not a carbon pencil, draw out certain stock details to a very large scale. My drawings were actually not scale but large sketches with dimensions roughly figured thereon.

Do not cut the roll up into small pieces, but into four long lengths. Each

length should fit the side of your bedroom. My four sheets I pinned up to the oak beams of my digs' bedroom in an old-world cottage in Amersham, Bucks. I got so used to seeing these details that when I came to draw them out, all I had to do was close my eyes and mentally look round the bedroom till I came to the picture of the detail I needed.

It is not always the student who laboriously draws out construction details and makes beautifully finished sheets who can satisfy the examiners on this subject. By this method you often lose the theme of the exercise which you are more likely to grasp by means of quick sketches and drawings.

Do not forget that, although you may have taken a few years to learn your construction, you have to cough it up, as it were, over a period of three hours. This is a point which many students appear to forget. Let me explain my point, by an actual example. There were five questions at the Inter. Exam. The first, a compulsory question, was a long one which in the office you would have spent a few days working out. Your time, however, was three hours for five questions. The boy behind myself made beautiful sheets of his first question but did not manage any other. The boy in front rationed his time and tackled all five. His full sizes were freehand and his half inches would have got him the sack. The boy in front was successful. The boy behind no doubt knew his construction but if he got full marks for his one question the marks could only be in the region of 20 out of 100. Do not forget that you have an oral examination at which you can redeem yourself if you have put something on paper, but there is no redemption for a blank sheet. More students fail on this question of time than on the actual construction.

Make a study of past examination papers; it may well repay you. Two of us did this before we sat the Inter. We found that there were about six stock questions. I cannot remember what they were, but they kept appearing over a period of years. We had those six questions and the answers to them off pat. I was fortunate; two came up.

Do not by any means confine yourself to traditional construction. Make a study of the modern construction now being practised both here and abroad. You may not be able to see it in actuality but the illustrations found in all architectural magazines should give you the answer. The building research station digests, which are issued monthly, should be read and the contents noted.

As I mentioned at the beginning, you may find a difference between examination construction and actual. It is nearly one and the same, perhaps the former is more refined, the actual more practical. To learn the practical you cannot do better than, as I have already mentioned, study the work on the site. Do not go about the site as though you knew all there was to learn. You will not learn anything from the men if you do. Give them the idea they know their

job, which they no doubt do, and that you are anxious to learn. There are many tips to be learnt from practical experience which you will not find in any text-book.

A friend of mine went and worked for a builder for a year. Not only did he see every job as it progressed but the inner workings of a building contractor's business, which gave him a better appreciation of the whole picture. We are apt to forget that we could not build without the builder.

A builder will usually tell you that an architect takes his sections through the easiest parts of building and leaves the parts which he is uncertain about for the builder to fathom out. Do not let this be said of you. Fathom it all out

for yourself. If you are then asked on the job by the foreman how so and so shall be constructed, you can give a sensible answer. Be sure to ask for his advice at the same time. If you can do both you will go up in his and the workmen's estimation. You may say, "Does that matter?" I am old-fashioned enough to say, "Yes, definitely"; after all the workmen do the job.

When studying building construction make a special study of external and internal materials and finishes. You may be able to put up the best constructed building possible, but it is always advantageous to clothe the building in a suitable finish—a finish which will not only enhance your design but which will be suitable for the

locality and climate into which your building has to fit. Bear in mind the atmospheric conditions to which your building will be subject. If you see a building which is pleasing to your eye make a note and add to your study sheets, the materials which helped the composition. Do not forget your client sees the outward garb of your building but you have to see this and the inner construction which holds it together.

As I said at the beginning, building construction is not a mysterious science but applied commonsense. It can become both an interesting and fascinating subject to study if you go about it in the right way.

M. E. TAYLOR.

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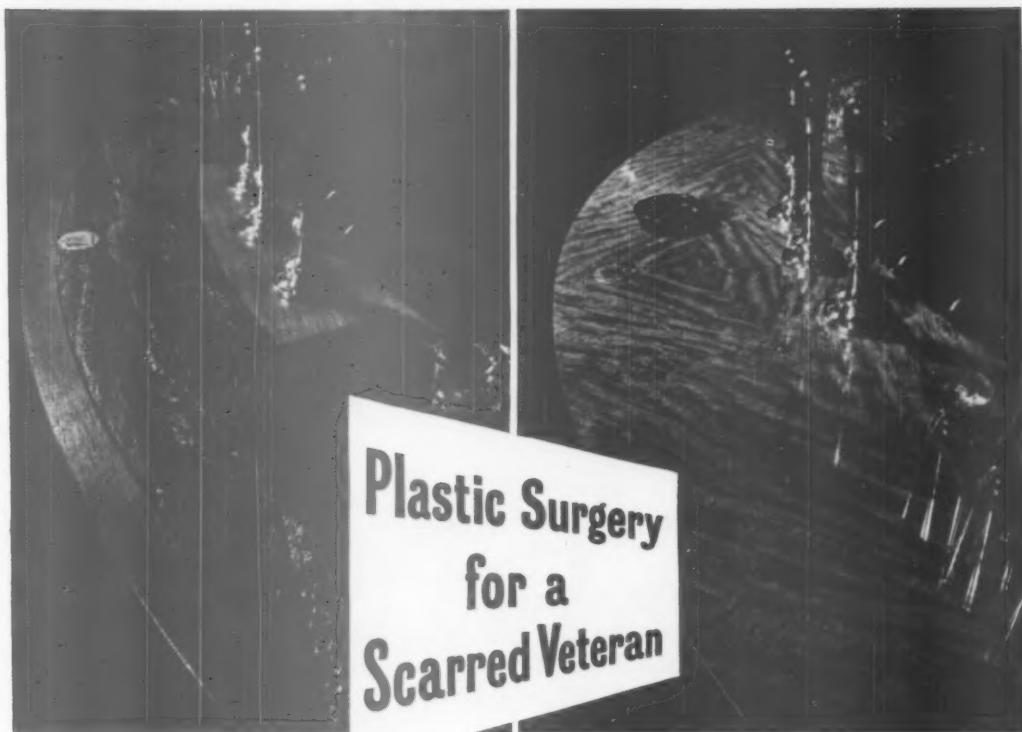
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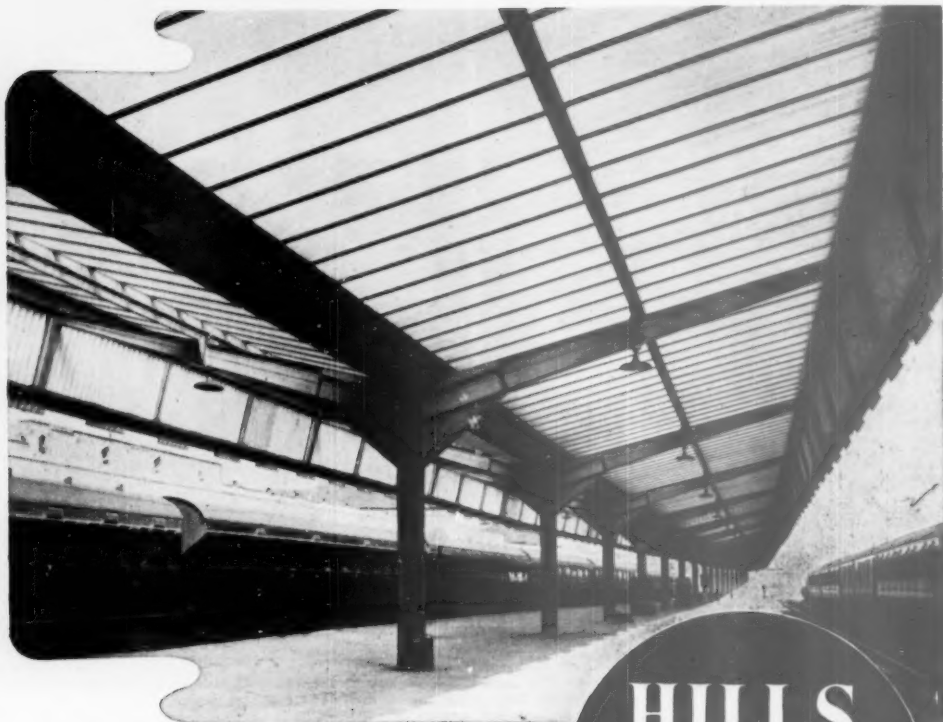
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# NEWS of the BUILDING INDUSTRY

THE terms of reference were left to the discretion of the team, who decided (i) to study the part played by American trade unions in the achieving and maintaining of the high average rate of output in the U.S.A. and (ii) to consider if or to what extent similar methods, or modifications of them, could be applied or introduced in British industry by British trade unions.

THE six weeks' duration of the tour, says the report, was a limiting factor. The team concerned itself with psychological attitudes rather than examination of production methods. The fact that certain methods were used did not explain why they were used. The team sought to discover whether industrial development took place in spite of or because of trade unions.

In their recommendations the authors of the report call amongst other things for co-operation by unions in the application of "scientific management." It is suggested that unions should extend their educational facilities to provide week-end and summer school courses in the economics of trade unionism in full employment and the implications of an increasing standard of living. The retention by the Trades Union Congress of a competent technical staff to help in establishing union production departments was another point.

Of interest are the recommendations under the head of technical advance which are:

"In initiating or participating in the introduction of incentive schemes, unions should, where practicable, seek to increase production efficiency through a greater use of mechanical aids and the application of time and motion study (see later) in order to maximize earning opportunities.

"As trade unionists want the standard of living to rise continually they cannot justify opposition to the installation of new machinery or the use of re-deployment techniques. There is every justification for demanding prior consultation in order to plan the necessary labour adjustments."

It is also recommended that there should be exchange of selected American and British trade union literature, films and technical articles. In making their twenty-two recommendations the team have not been unaware of the financial implications to unions but are convinced that the ultimate benefits will more than balance the costs.

Related to the particular recommendations quoted above, it is of interest to note the team's comments, in the body of the report, on Building trades unions (with which the team did not have as much contact as with others).

There are thirty trade unions organizing in the industry. The American Federation of Labour has a Building

## TRADE UNIONS AND PRODUCTIVITY

Following the Working Party and Anglo-American Productivity Team Reports there has now been published under the title "Trade Unions and Productivity" a report by a team of British Trade Union Officials who recently visited the United States.

Exact comparison between American and British conditions is not generally possible. Nevertheless, this report, particularly if read in conjunction with the other two, contains plenty of food for thought and possible future action.

The space allocated to the Building Industry is relatively small, but there are many factors common to industry as a whole which bear on the building side. The report can be obtained from the British Trades Union Congress, Smith Square, London, S.W.1, price 2s. 6d.

Points from those sections of the report which refer to the Building Trades are reviewed on this page.

and Constructional Trades Department which co-ordinates union interests in respect of government legislation and examines trends in the industry, whilst wages, working hours and conditions are usually negotiated on a local or district basis.

In spite of modern developments—such as mechanization which are continually entering into every phase of production, the industry does not lend itself to the use of time, study and other "scientific management" techniques. The main drive for increasing productivity comes from the employers who plan well in advance and commonly set production targets. Union participation takes the form of maintaining and improving operatives' skill and refraining from imposing restraints on the use of new machines.

Payment by results in any form is opposed by employers and unions. It is recognized that productivity is dependent on skill and the importance of training is appreciated. The team visited the Cleveland Trades School which is governed by representatives of employers, unions and the Board of Education and financed by Federal and State subsidies. Materials and equipment are supplied free by employers.

While the report acknowledges that the high standard of this school may not be typical, it serves to show how building unions can help to make the most of industrial efficiency and individual output.

Summarizing, the report notes that efficient management sets the pace of American productivity, together with the absence of serious opposition to labour-saving machinery. But all managements are not equally efficient, therefore the American unions' contribution to increasing productivity takes the form of spurring the less efficient.

Competition in the U.S.A. compels management to be progressive and to this Americans attribute their high standard of living. Unions have relied on competition to keep consumer prices down, thus increasing purchasing power, but they oppose attempts to

promote competitive efficiency at the expense of wage rates.

"As long as American capitalism continues to 'deliver the goods' in the form of a rising standard of living, there is little possibility of the idea of a carefully defined programme of social and economic planning gaining many adherents."

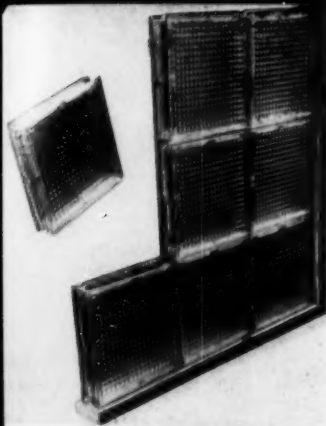
Of profits the report says that the American unions' attitude is typical of their acceptance of a capitalist economy. Profits, however high, are not regarded as immoral or a social evil. Most American unions regard group bonus arrangements and profit-sharing incentive schemes as tactics for avoiding increases in basic rates. So far as manufacturing industries are concerned, only 30 per cent of operatives are on piece-work or incentive systems.

Union preference for time rates is based on (i) dislike of abuses which inevitably creep into the allocation of work, (ii) the limitations imposed on incentive earnings by speed of machinery, and (iii) earnings dependent on individual output enable employers to shift business risks to employees.

This last point, comments the report, is of interest because it shows that American unions, in spite of relying on competition to keep consumer prices down to economic levels, are anxious to prevent competition operating at the expense of wage rates or earnings.

One of the most amusing of the report's remarks is in a footnote to a paragraph pointing out the fallibility of time studies. Here it is: "There is reason to believe in fact that the average discrepancy of time-study engineers when rating or levelling similar jobs is greater than average difference in the pace of the operatives being time-studied."

Following the summary of American conditions the problems of British trade unions are dealt with. In this section there are comments on incentive schemes, education in management, the redundancy problem and joint consultation.



## STRUCTURE PARTITIONS

A3/2

This hollow plastic block is  $7\frac{1}{2}$ " square by  $1\frac{1}{4}$ " thick and weighs just under 1 lb. The faces are smooth with internal diamond facets to diffuse light. The block has been developed for interior partitions, which may be built in situ or assembled separately and placed in position complete. The blocks can be cut to shape. Normally they may be connected by means of the interlocking fins on the edges, but panels can be waterproofed by using mastic.

Blocks are said to be rigid but must not be used to carry more than their own weight. Since maximum carrying strength is 20 lb, partitions should not be more than 16 blocks high without the use of supporting members.



## SERVICES HEATING

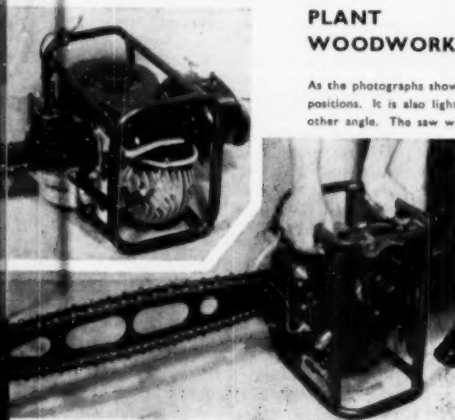
B3/2

Of the two types of tubular electric heater illustrated the lower one has been recently designed for positions where dampness, water spray or rough treatment preclude the use of the non-waterproof model.

The heater is of heavy gauge seamless steel tube with a welded terminal box fitted with interconnections between tubes. Normal loading is 180 watts per foot for the complete bank, but this can be reduced to 120-240 watts per foot if required.

The box cover gives easy access for wiring. The box is drilled top and bottom for  $\frac{1}{2}$ " conduit or packed gland.

Available in lengths from 3' 0" to 12' 0" and for various voltages A.C. or D.C.

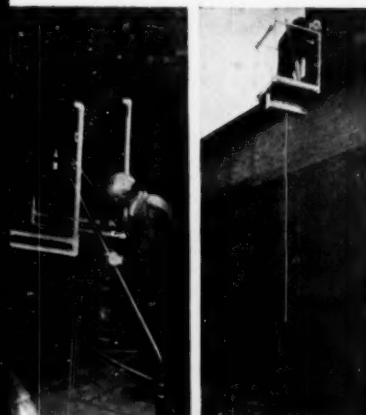


## PLANT WOODWORKING MACHINERY

E1/3

As the photographs show, this saw can be used with ease in two positions. It is also light enough (40 lb.) to be worked at any other angle. The saw will fell up to 40" timber. The engine is

2 cycle,  $4\frac{1}{2}$  h.p. specially designed for saw work. All parts are British and the makers guarantee full servicing and availability of spares in all parts of the world where the saw is used. Air intake is specially designed and shaped to avoid choking. The petrol tank swivels and alternative hand controls are provided to suit the saw's position.



## PLANT LIFTING GEAR, ETC.

E6/i

First produced in January 1950, this hydraulic working platform is raised and lowered by one operative working a lever in his working position. The working weight is 540 lb. Working height is 20' 0" to 23' 0". In the lowered working position the device measures 5' 11" x 5' 11" x 9' 5 $\frac{1}{2}$ " high. Scissored (as shown in the left photograph) for storage or passing through narrow spaces, dimensions are 2' 5 $\frac{1}{2}$ " x 8' 0" x 6' 5 $\frac{1}{2}$ " high. The feet are fitted with wheels and adjustable jacks. Rungs are incorporated on one leg for the operator to climb into position.

The platform is raised on a triple telescopic ram, the sections of which have, it is claimed, adequate overlap to give real stability. Note the guard rails and toe boards to the platform. This hydraulic platform has been passed by factory inspectors.

THE ARCHITECT AND BUILDING NEWS,  
AUGUST 17, 1950

## MOSAICS

The names and addresses of manufacturers of any item illustrated in MOSAICS, together with more detailed information relating to their products—including price and availability—will be forwarded to readers on request.

Letters should quote the serial number and be addressed to :

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## INFORMATION

### AND

## CATALOGUES RECEIVED

- "Expanded Metal Lathing for Plasterwork" received from the Expanded Metal Co., Ltd., contains clear line drawings and a number of photographs which, together with articles dealing with various applications of expanded metal constitute a useful reference booklet. Copies of this well-produced book may be had on application.
- B.R.S. Digest No. 20 (July, 1950) concerns the Weathering, Preservation and Maintenance of Natural Stone Masonry.
- Ingersoll Locks, Ltd., have sent a catalogue of their various locking devices. The catalogue explains the master key system which enables any number of doors to be fitted with rim, mortise or padlocks of different combinations each opened by a separate key but all controlled by one master key and any number of sub-master keys.
- Air Control Installations have recently issued three leaflets giving data and prices on an extractor fan for factories, workshops, etc. (net price, £16 16s. and £18 18s.), a window type fan (net price £10 10s.) and a portable dust control unit.
- "Power Laundry" Directory and Year Book (1950); Trader Publishing Co., price 15s., contains complete specifications of all principal machines for laundry and dry-cleaning factories and a new set of layout plans.
- Aluminium Windows are the subject of a pamphlet received from the Northern Aluminium Co., Ltd. The publication refers to a number of case histories illustrating durability of aluminium under different atmospheric conditions.
- Castigated steel beam construction is explained and well illustrated in a brochure published by The United Steel Co's., Ltd., for the Appleby-Frodingham Steel Co. The book contains a number of graphs comparing relative strengths of B.S.I. sections and of the castigated beams fabricated from those sections.

## \* INTEREST \*

THE GOVERNMENT have decided to change and simplify the procedure by which local authorities are required to obtain an authorization under Defence Regulation 56A before undertaking any building work to which the Regulation applies. Much of the work at present carried out by local authorities is work in respect of which a Government Department has agreed to defray the whole or part of the cost, and this is exempted from the necessity of obtaining authorization. In future, exemption from the operation of the Regulation will also apply to schemes approved for the purposes of loan sanction by a Government Department, either as part of a block sanction on an annual programme, or as a single sanction to an individual scheme or group of schemes. The Defence Regulations (No. 6) Order, 1950, of which Article 1 gives effect to this change, has now been made. The Order came into operation on August 1st, 1950.

The Local Government Manpower Committee also recommended that where, as regards a number of functions, the Minister charged with the duty of authorizing building work under Defence Regulation 56A is not in other respects the responsible Minister, the Sixth Schedule to the Defence (General) Regulations, 1939, should be amended so as to specify as the authorizing authority the Minister concerned with the discharge by local authorities of those functions.

These changes have been made in Article 3 of the Order. When the Order becomes operative, therefore, local authorities should no longer look to the Minister of Health for authorizing such work as is indicated in the Article in reference to paragraphs 10-14 of Part I of the Sixth Schedule, but should make application to the appropriate Minister.

STRAW FOR BRICKS is perhaps out of date, but straw hats for bricklayers may not be. When 30 Harrow boys visited the Festival of Britain site at the invitation of the L.M.B.A., Mr. Gough-Cooper, Vice-President of the Association, said that the building industry offered very attractive prospects to the public school boy who was prepared to dirty his hands, learn the trade and then put into practice the code of leadership which Public Schools still taught.

THE DEPARTMENT of Scientific and Industrial Research is taking part, for the first time, in the Model Engineer Exhibition at the New Horticultural Hall from August 9-19. The exhibits will illustrate some of the work which is being done at a number of the D.S.I.R.'s stations and the part which models play in research.

From the Engineering Division of the N.P.L. there are the micrometers used to measure the movement of parts of the structure of the Tower of London. The micrometers have been measuring movement at the Tower since 1916. It was these instruments that revealed recently that the quay wall of the Tower, which in places is 300 ft thick, is moving gradually away from the Thames.

The model on show from the Fuel Research Station is of the Calorimeter Building, specially constructed for work on domestic heating. It consists of four cabinets, each the size of a room in a small house, where the performance of domestic appliances is measured. The heat passing through the walls, floor and ceiling is automatically recorded without the instruments affecting the performance of the stove or whatever it may be. The model shows the construction of the rooms and the way in which the measurements are made from the control room.

THE JOINT IRON COUNCIL, in association with the Council of Iron-foundry Associations, has decided to intensify work upon problems of dust and fumes in ironfoundries, and to provide an advisory service on how these may best be dealt with in foundry practice. The work is being carried out through the British Cast Iron Research Association which is largely financed by the Joint Iron Council. A special committee of the Research Association entitled the "Foundry Atmospheres Committee" is supervising the work. Close collaboration is being maintained with the Joint Standing Committee on Conditions in Ironfoundries set up by the Factory Department of the Ministry of Labour.

AN ACCIDENT was nearly not prevented last week when a tile falling six stories from a scaffold without toe boards struck the welt of the shoe of a member of the *Architect and Building News* staff.

THE FORMATION of a new trade association of manufacturers of electric lighting and allied equipment is announced by Mr. A. Stanley Shier (a director of Thorn Electrical Industries, Ltd.), who was elected Chairman of an acting committee for this purpose at an informal meeting held on July 12th. The meeting was called in response to requests from various prominent firms in the lighting equipment industry who feel that the present trend of events in the field of distribution indicate the need for a new Association whose policy would embody the principles of the Fair Trading Code, whilst avoiding exclusivity agreements.

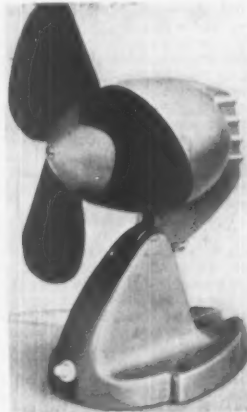
The new Association, which will be called "The National Association of Manufacturers of Electric Lighting and Allied Equipment," will include members of every branch of the lighting industry, including manufacturers of incandescent and fluorescent fittings (decorative, commercial and industrial), lighting auxiliaries and control gear. Among the founder members are Berry's Electric, Ltd., Dernier & Hamlyn, Ltd., Ekco-Ensign Electric, Ltd., Hailwood & Ackroyd, Ltd., Herman Smith, Ltd., Frederick Thomas & Co., Ltd., and Thorn Electrical Industries, Ltd.

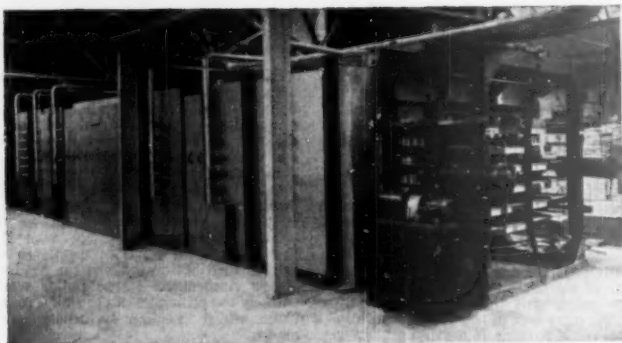
The new Association will not undertake the function of price fixing but will encourage the maintenance of approved trading terms to contractors and traders while permitting them full freedom to buy where they like. It will promote high standards of quality, workmanship and design and will discourage unfair trading and misleading advertising.

TWO BONUSES, one of £828 and one of £377, have been paid on two Shipley Council housing estates employing direct labour. These bonuses represent 40 per cent of the amount by which the ascertained expenditure was less than the estimate. The council took 60 per cent. On two forthcoming schemes the bonus will be raised to 45 per cent of the difference. It is reported that the estate to which the 40 per cent bonus applied comprised 36 houses which were completed in 15 months: the average speed per house in Shipley being about five months.

### MOSAICS CORRECTION

Owing to excessive trim on the Mosaics of July 28th illustrations C32, E31 and B22 are here reproduced, from left to right in the above order, so that readers who are filing the cards may paste them up.





The new passage kiln installed at the Boothern Tile works, Stoke, of Messrs. J. H. Barratt & Company. In the right of the picture is the power unit which moves the trays in alternate lines through the kiln. A similar unit working in the opposite direction is at the other end. The tiles on refractory setters can be seen on the trays.

**FIRMS EXPORTING TO ISRAEL** are invited to send catalogues and samples to Mr. Z. Rechter, Architect, of 8 Engel Street, Tel-Aviv.

**DECORATED HARDBOARDS**, referred to in Good, Bad and Indifferent for July 21st as being soon available are now available. This information comes to us from Messrs. Celluglos Products who state that they have been marketing

decorative hardboard since it was released from licence last year.

**THE TIMBER DEVELOPMENT ASSOCIATION** announces that in the autumn it will move its headquarters to College Hill, Cannon Street, London, where a red brick mansion large enough to house all the London staff, including those engaged in research and design on behalf of the timber industry throughout the country, has been taken.

## GOOD, BAD OR INDIFFERENT?

By A. FOREMAN

No. 6

### Fixing Insulation Boards

There are undoubtedly great advantages in using insulation boards for lining walls and ceilings. They provide a good even surface free from defects or cracks, and also help the thermal and sound resistance. Unfortunately the uniformity of the boards tends to emphasize any irregularities at the joints or any discoloration which may subsequently arise, consequently it is most important to avoid any defects which might spoil the appearance of the finished job.

Unless the boards are to be plastered or covered with a thick wall- or lining-paper or plastic paint it is almost impossible to make the joints invisible. The joints must therefore be covered or deliberately emphasized.

The joints must be regularly spaced and neatly made to look nice, not just covered with a batten nailed over each joint regardless of appearance. Incidentally battens, especially narrow ones, tend to curl away from the board surface and create dirt-holding cracks.

Boards are available in thicknesses of  $\frac{1}{2}$  in.,  $\frac{3}{4}$  in., and  $1\frac{1}{2}$  in., and in different lengths from 6 to 16 ft. They are usually 4 ft wide, but sometimes 2, 3 and 6 ft are available if these are more convenient. It is well worth planning out alternative lay-outs to achieve the most attractive appearance and to reduce waste of time and material due to excessive cutting of boards.

Boards can be cut with an ordinary hand-saw, face upwards, of course, but if you do much fixing it is worth buying a

board cutter specially made for the work at about £6 10s., as it makes a much neater job. If the joints are not to be covered the boards often look better with V-joints: for this treatment the boards can be bevelled with a rasp, with another special tool (£3) or an attachment (30s.), fitted to the cutting tool. More elaborate joints may be made by grooving the boards parallel to the joints, but if complicated grooving is required it is better done by the maker, which means that the boards must be ordered cut to finished sizes as you may have difficulty in matching the grooving on the job.

Insulation boards are usually supplied rather dry and are likely to expand as they pick up moisture on the job: they should be given a chance to do this before they are fixed by standing them, where they are to be fixed, on edge for 48 hours in a way that the air may get to both sides. Never fix the boards butted tightly together but leave a gap of  $\frac{1}{4}$  in. between them so as to prevent bulging if the boards subsequently expand.

The joints may be covered with any one of a variety of cover strips. Among these are timber battens or mouldings, strips of the board itself or of hardboard, corrugated "Anaglypta" strips or metal beads. The profiles of the coverings are mainly a matter of taste, but it is wise to avoid profiles with a tendency to collect dust if they are to be run horizontally on the walls as the housewife will not thank you if they are used.

Boards must be supported on all four edges and at points not more than 18 in apart so it is necessary to space studs,

THE MINISTER OF WORKS has appointed Mr. A. W. Cunliffe, M.B.E., to be his Private Secretary in succession to Mr. P. H. Cooper.

**B.S. HANDBOOK NO. 3** issued in 1944 and its Supplement issued in 1945 (bright blue covers) are now dangerously out of date and it is no longer wise to make reference to them, on account of the great number of major alterations subsequently required by the changes from wartime to peacetime production.

Copies of B.S. Handbook No. 3: 1950 "Building materials and components for housing" price 25s. post free, and of PD.1023 "Addendum No. 3: 1950 to B.S. Handbook No. 3: 1947" price 5s. post free, can be obtained by application to the British Standards Institution.

**THE COLD GALVANIZING PRODUCT**, formerly known as "Galvanite," is now being packaged and sold under the description "Rustanode" Cold Galvanizing by C. & P. Development Co., 122 Southwark Street, S.E.1. The nature of the product remains unchanged.

**SILICONES** are to be made in this country. Messrs. Albright & Wilson, Ltd., who for the past four years have acted as distributors in Great Britain, announce their intention to manufacture these products which are available in the form of compounds, greases and fluids, as well as resins and varnishes for use as heat-resistant waterproof materials and as bonding agents and protective coatings.

joints or other backings to give adequate support and evenly-spaced joints without excessive cutting of the boards. The supports must be absolutely level and true. Even slight undulations on the boarded surface will look quite bad if dust collects on part of a wall surface or the light is reflected unevenly.

Unless the joints are to be covered, large-headed nails should be avoided as they will always show through finishes such as paint or distemper because they collect dirt and appear as dark spots (a form of "pattern staining"). Lost-head nails or panel pins driven at an angle are almost invisible once driven home and they may be covered by the finishing without difficulty. The nails on opposite sides of a joint should be in pairs because if they are staggered the boards are likely to show slight difference in levels. Always fix boards down the centre first and then work outwards to the edges and ends. The nails should be 6 to 8 in apart and about  $\frac{1}{4}$  in. from the edges of the boards.

A number of proprietary systems of metal fixing strips have been produced for using insulation boards as linings: these enable the boards to be fixed under roof-sheeting, as a horizontal ceiling or as an inner lining for walls without using timber grounds. They can be utilized for concrete or brick buildings as well as for steel framing as an alternative to nailing to battens. The majority of these systems incorporate light-gauge metal strips or beads, fixed by clips to the framing of the building, which grip and cover the edges of the boards. It is, however, possible to fix the boards with V-joints in which case no metal is visible. The supporting strips are usually spaced 2 ft. apart, but the centres of the supports for the metal strips can be varied up to 12 ft 6 in, provided the strips themselves are of the appropriate gauge and design. The distributors of these systems will give detailed advice on their application to any particular job.



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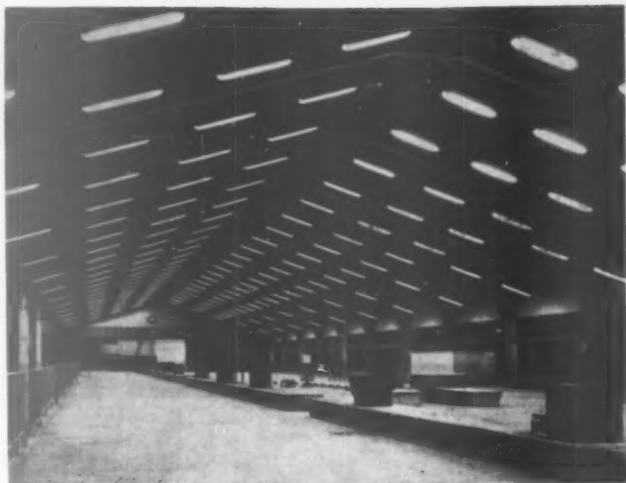


## OCEAN TERMINAL SOUTHAMPTON

The illustration shows the interior of the customs building—one of the largest in the world—at the Southampton Ocean Terminal Dock, which was officially opened by the Prime Minister on July 31st

The one examination room, shown here, serves 1st class and other Tourist Class passengers. Each section covers an area of about 500' 0" x 90' 0". The examination benches are 30' 0" from the quayside wall of the building

The lighting consists of fluorescent reflector fittings fixed to the roof between the main cantilever beams. Mounting height at eaves level is 12' 0", and at the apex 25' 0". Spacing between fittings is 10' 0" on beams 20' 0" apart. The lights provide approximately 17 lumens per square foot along the examination benches. The fittings were supplied by the British Thomson-Houston Co., Ltd.



## DOMESTIC ELECTRIC WIRING—No. 1

### Some Modern Tendencies

By T. C. Gilbert, M.I.E.E.

#### (1) *Assisting the Builder*

It may be questioned whether the Ministry of Works Working Party Report, or the Ministry of Health Girdwood Committee Report lay enough stress on the serious delays and interference with organization caused to the main contractor on housing sites by the activity (or lack thereof), of sub-contractors. Many specialized trades are now the subject of sub-contracts, which require careful site organization. The electrical contractor, for instance, can easily disrupt organization, owing to the nicety of timing required if delays to all other trades are to be avoided, and owing to possible damage to his comparatively vulnerable materials by following trades.

Rigid wiring systems, vulnerable as they sometimes are by damp and moisture, can defeat the builder's careful site organization and any system of bonusing that he has introduced for carpenters or plasterers.

Plumbing and hot-water-fitting sub-contractors can commence their work practically at any time, as their materials are robust and are unaffected by water coming in through unfinished roofs or windows, nor are they liable to serious damage by any following trades. But the electrical contractor, using steel conduits, must await complete weather-proofing of the building, and the usual procedure is that as soon as the roof is on and the window openings reasonably closed, the wireman starts work by cutting his conduits into the first-floor joists prior to the laying of the floor and the erection of the internal partitions. This is usually as far as he can get, and he leaves the house until this later work is done; he may, or may not, install his cables in these conduits during the first visit, depending upon his meticulous observation of regulations or the architect's requirements regarding drawing-in prior to or after plastering.

The alternative is for the carpenters to go ahead with floor laying before the electrician gets to the site. In this case marked boards have to be left loose and traps cut at various points. This has the effect of stultifying incentives for the carpenters, who like to go ahead with speedy laying through a block of houses without preoccupation with loose boards and traps. If the floors are laid *after* the electrician's first visit the carpenter must still leave boards loose over conduits and traps at draw-in boxes, and exercise considerable care, or nails may be driven through the thin conduits. Going back and taking up boards in this case is fatal to incentives, and carpenters never cease to grumble at the delays and hold-ups due to the electrician.

Once the floors are down, however, internal partitions go up and the plasterers descend upon the building. The electrician must therefore return at the right time, to complete the remainder of the conduit work and the necessary chasing of the green internal walls. Should the electrician

delay his return by even one day he may find plastering completed on some walls, with the result that finished work must be cut away—again fatal to bonusing for the plasterers. Often internal partitions are of breeze blocks, without top weight, and chasing is likely to cause collapse; deep chases are often necessary, unless the thin skims of plaster now common are merely to cover the steel conduit, with the resultant ineradicable and inevitable rust streak upon the finished work.

Electrical contractors engaged upon housing work are usually small firms, with a limited number of operatives. It is not possible to have the men in two places at once, and sometimes not in one place at the right time. In this connection the use of a more flexible wiring system, usually of the all-insulated type, has considerable advantages for the main contractor. For one thing, the electrician need make only one visit to the house for wiring, *after* all floors are solidly laid and internal partitions erected; he can go right ahead and complete the wiring in one sweep, just before plastering is started. It is easier to arrange for one visit at the right time than for several.

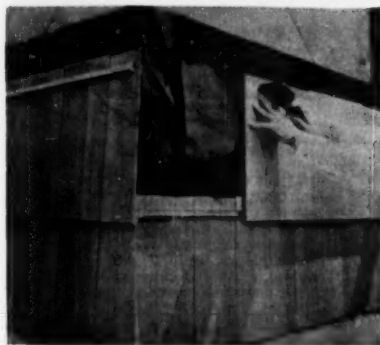
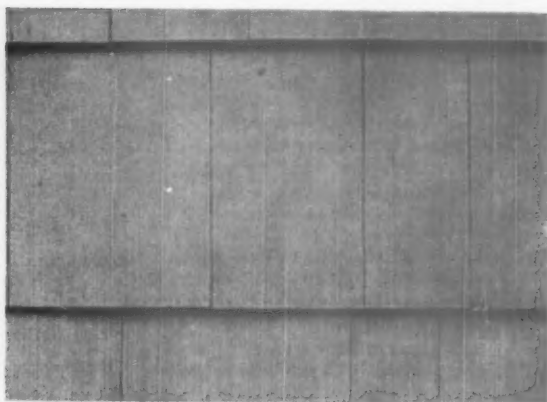
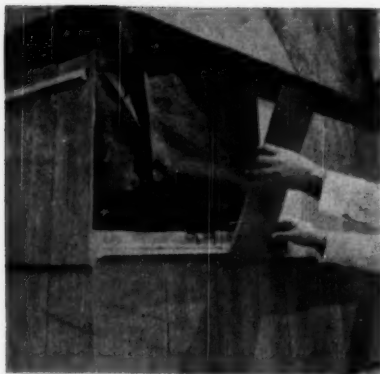
The illustration shows the unorthodox runs now used for these wiring systems, whether non-metallic conduit or tough rubber cables, and it will be noted that no slotting of thin joists or chasing of breeze partitions is involved. No traps or loose boards are necessary, as the only draw-in points are the switch and light positions, or the boxes associated with the socket-outlets on the ring circuit. It will be clear that many obstacles to the more complete introduction of bonusing for the carpenters are removed, and one of the main recommendations of the two Reports mentioned above was the extension of incentive payments by the builder. With these wiring systems some form of bonusing is also possible for the electrical operative.

Of the two wiring systems mentioned, non-metallic conduit is the more advantageous, as wall chasing and the risk of rusting are both absent. The use of plastic conduits with plastic-insulated wires and cables will be dealt with in later articles.

(To be continued)



Flexible cable installed in angles of wall and ceilings

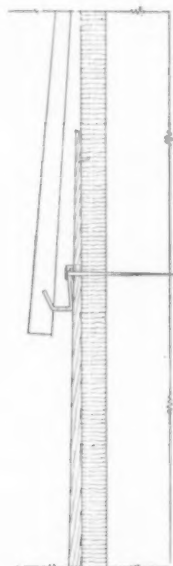
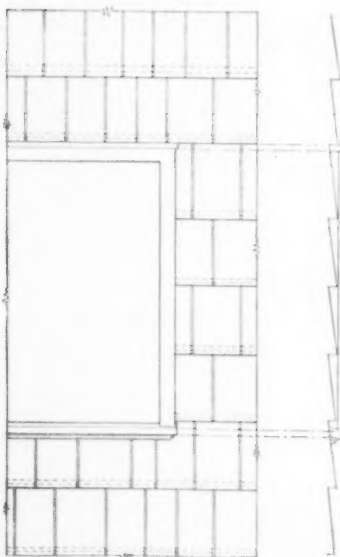


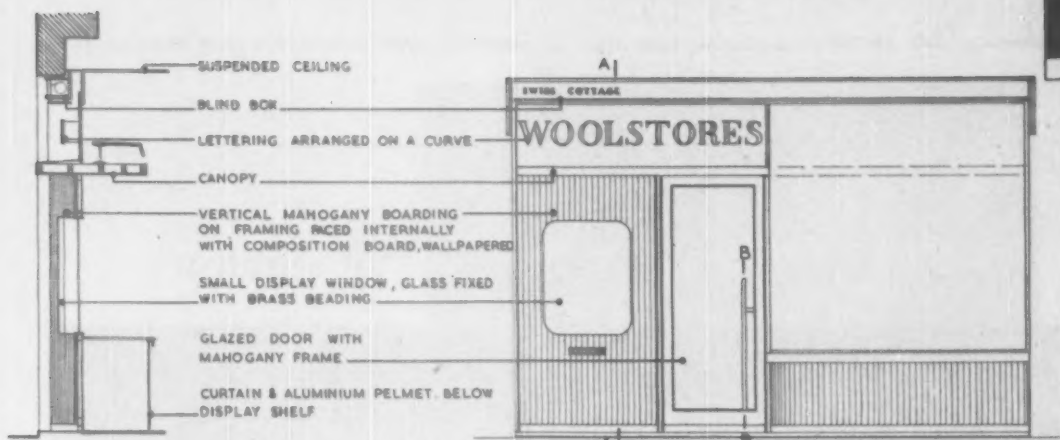
## CONSTRUCTION DETAILS

The illustrations of this new method of hanging shingles on a track is published in "FORUM" from which the information is taken. Increased speed and reduced cost are claims made for the system. Individual alignment and nailing is done away with and the resulting saving in time and labour is said to be 50 per cent.

## SHINGLES ON TRACK

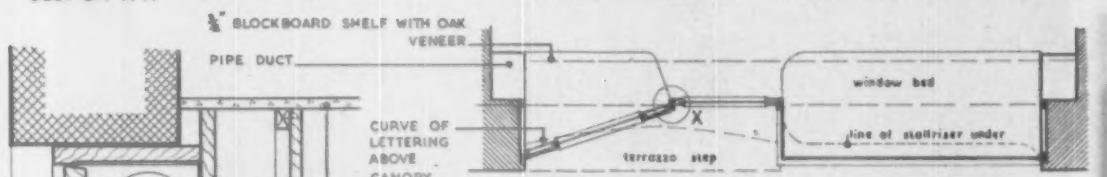
The track is made of coated aluminium in 8' 0" lengths. The 18" shingles are slotted to hang on the track. The track is notched at 4" centres for nailing. The bottom track is nailed to the studs over sheathing or insulation, then shingles are slipped in and pinned with a staple at the top. Each succeeding track is then nailed through the course of shingles below. Air circulation is provided behind the shingles through holes pierced in the track. Single shingles can easily be replaced





SECTION A-A

EXTERNAL ELEVATION OF SHOP FRONT



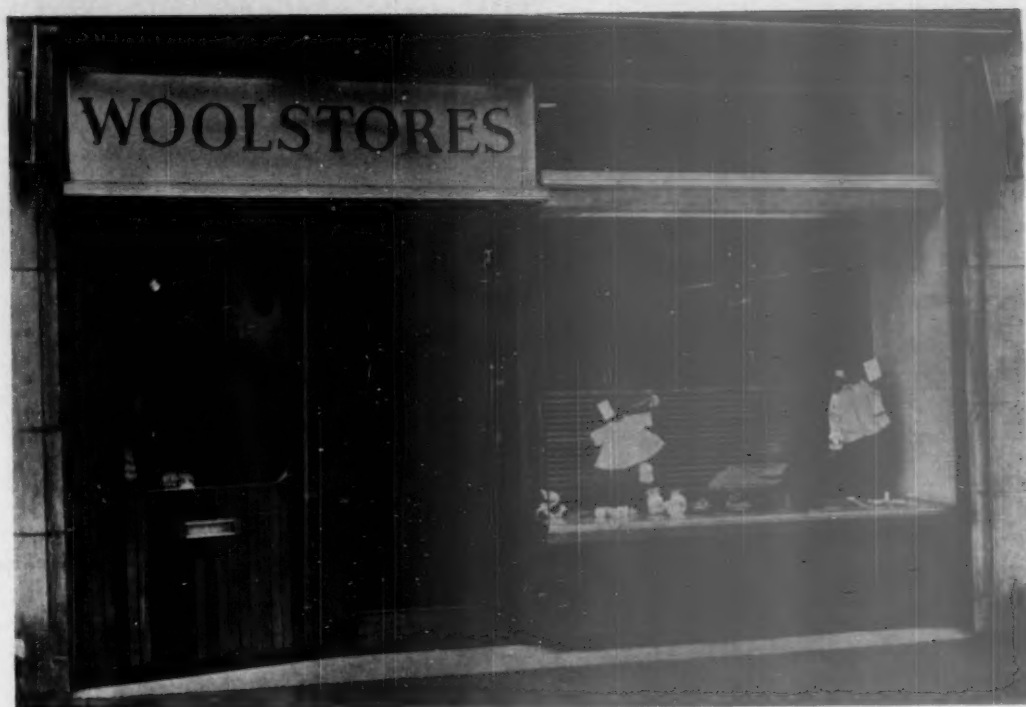
PLAN • SCALE 1/4" TO 1'0"

SECTION THRO' DOOR HANDLE AT B-B

PLAN OF DOOR HANDLE

SECTION THRO' DOOR SCALE 1/8 FULL SIZE

DETAIL AT X SCALE 1/4 FULL SIZE



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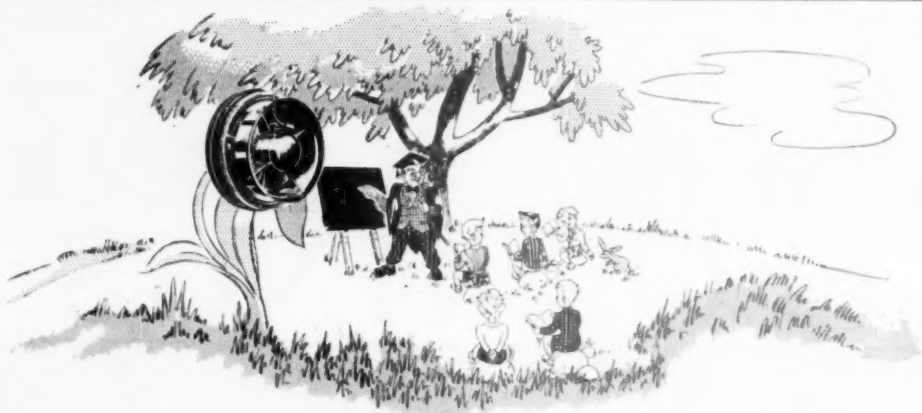
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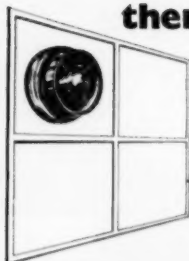
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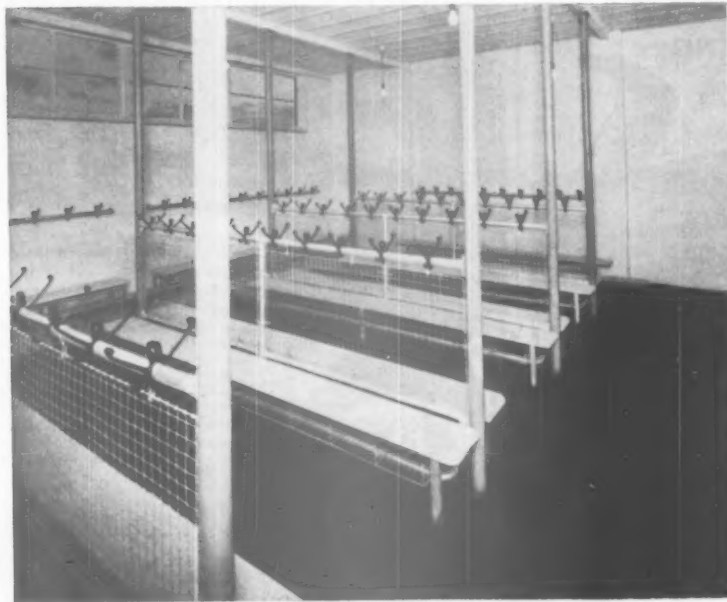
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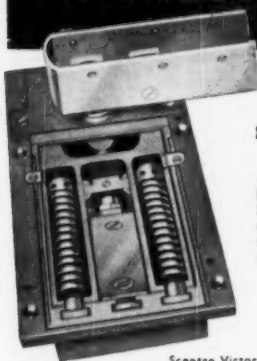


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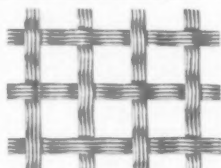
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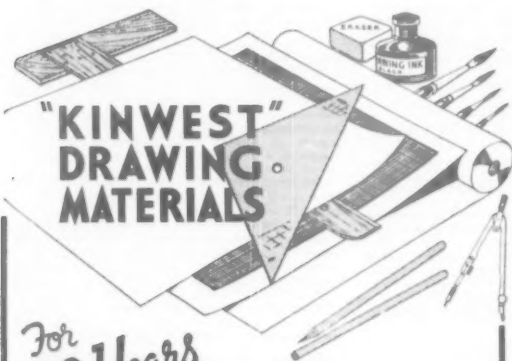
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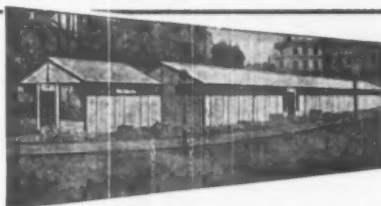
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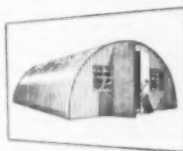
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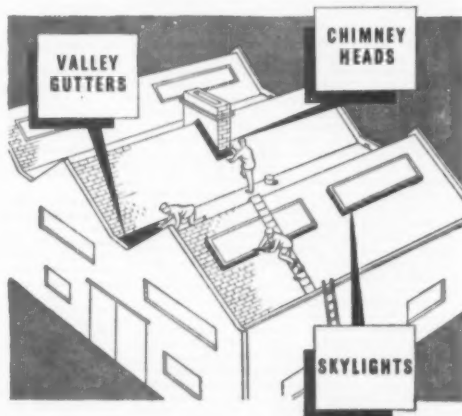


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## OFFICIAL ANNOUNCEMENTS

## BOROUGH OF LEIGH.

## ARCHITECTURAL ASSISTANT.

APPLICATIONS are invited for the permanent appointment of ARCHITECTURAL ASSISTANT in the Department of the Borough Engineer and Surveyor, at a salary in accordance with Grade V of the National Scale (£520-£570).

Candidates should have good general architectural experience and preference will be given to those with suitable qualifications. Experience in the preparation of working and detail drawings, layouts and specifications in connection with housing and public buildings would be an advantage.

The appointment, which will be subject to the National Scheme of Conditions of Service of Local Government Officers, to the provisions of the Local Government Superannuation Act, 1937, and to the successful candidate passing satisfactorily a medical examination to be conducted by the Council's Medical Officer of Health, will be determinable by one month's notice on either side. Every candidate must disclose in writing whether to his knowledge he is related to any member of the Council or to the holder of any senior office under the Council. Canvassing of members of the Council, directly or indirectly, will be disqualifying.

Applications, endorsed "Architectural Assistant," stating age, qualifications and full particulars of experience, together with the names of two persons to whom reference can be made if so desired, must reach the undersigned not later than the 18th August, 1950.

ALBERT JONES, Town Clerk.

Town Hall, Leigh, Lancs. 14776

## CROWN AGENTS FOR THE COLONIES.

DRAUGHTSMAN required by the Government of Kenya for the Public Works Department for one tour of four years with possibility of permanency. Salary according to age and experience in the scale £670 a year rising to £840 a year. Outfit allowance £10. Free passages. Liberal leave on full salary. Gratuity payable on satisfactory completion of services. Candidates between 30 and 40 years, must have had at least 10 years' experience in a Civil Engineer's Drawing Office. They must be neat and accurate draughtsmen and capable of designing simple structures. Apply at once by letter, stating age, full names in block letters, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the Crown Agents for the Colonies, 4 Millbank, London, S.W.1, quoting M/N/26645/1A on both letter and envelope. The Crown Agents cannot undertake to acknowledge all applications, and will communicate only with applicants selected for further consideration. 14737

## SUDAN GOVERNMENT.

THE Public Works Department requires an ARCHITECTURAL ASSISTANT aged 24 to 16, for service in the Sudan. The duties consist of the preparation of working drawings for general building work. Candidates should have a sound architectural training and experience of general building work and be capable of the preparation of working drawings.

Appointment will be either on Short Term Contract with bonus for an initial period of two years on a salary scale £E591 to £E1215, or on Short Term Contract without bonus on a salary scale £E632 to £E1296. In either case starting rate would be fixed according to age, qualifications and experience, but would not exceed £E917 on Short Term, without bonus, terms.

Cost of living allowance varying between £E143 and £E352 per annum according to the number of dependents, is at present payable, and subject to certain limitations, an outfit allowance of £E40 is payable on appointment. There is at present no income tax in the Sudan. Free passage on appointment. Full particulars and application form may be obtained on application to Sudan Agent in London, Wellington House, Buckingham Gate, London, S.W.1. Please mark envelopes "Architectural Assistant." 14714

## WAR DEPARTMENT.

APPLICATIONS are invited for the following vacancies in the Fortifications and Works Directorate at Cheshington, Surrey:—

DRAUGHTSMEN (Civil Engineering). Must have practical experience of reinforced concrete or steelwork or general civil engineering work.

Applicants for the above vacancy should have reached a technical standard of not less than Ordinary National Certificate.

DRAUGHTSMEN (Architectural). Must have had a recognised training and not less than 3 years' experience in an architect's office.

Candidates for all posts should be under 50 years of age. Salaries for the posts are on the range of £283-£495 per annum. Starting salary will be fixed according to age, qualifications and experience. Annual increases up to the maximum of the range are payable subject to satisfactory service.

The posts are temporary but have long-term possibilities, and open competitions are held periodically to fill established posts.

Opportunities for promotion to Leading Draughtsmen and above arise from time to time. The work is varied and interesting and good career facilities exist.

Apply in writing, stating age, nationality and full details of qualifications and experience, to The War Office (D.F.W.Co-Ord), "A" Block, Leatherhead Road, Cheshington, Surrey. 14733

## FLINTSHIRE COUNTY COUNCIL.

## COUNTY ARCHITECT'S DEPARTMENT.

APPLICATIONS are invited for the appointment of a SENIOR QUANTITY SURVEYOR in the County Architect's Department at a salary in accordance with Grades A.P.T. VIII-IX (commencing at £710 per annum rising to £900 per annum). Applicants must be Fellows or Professional Associates (Quantities Sub-division) of the Royal Institution of Chartered Surveyors, and must be thoroughly experienced in the preparation of Bills of Quantities, Specifications, and Schedules of Works for large contracts carried out by Local Authorities, including measurement, adjustment and the preparation of interim and final accounts.

The appointment is supernumerary and subject to the passing of a medical examination. Applications will be considered from Registered disabled persons.

Applications, on a form to be obtained from the undersigned, together with the names and addresses of three persons to whom direct reference can be made, are to be submitted to me not later than the 21st August, 1950.

W. HUGH JONES,

Clerk of the County Council, County Buildings, Mold. 14714

## BIRMINGHAM CITY TRANSPORT.

APPLICATIONS are invited for the appointment of a GENERAL ARCHITECTURAL ASSISTANT in the Civil Engineering Department of Birmingham City Transport.

Applicants must have had experience in design, construction and maintenance of buildings, preparation of specifications, estimates and quantities.

The salary will be in accordance with the National Joint Council A.P.T. Division, Grade III—£450-£495 per annum.

The appointment is subject to one month's notice on either side and to the provisions of the Local Government Superannuation Act, 1937.

The successful applicant will be required to pass a medical examination.

Applications, endorsed "Architectural Assistant," stating age, qualifications and experience, together with copies of two recent testimonials, must reach the undersigned not later than 9th September, 1950.

F. C. HADLEY, Secretary.

The Council House, Birmingham. 3. 14725

## THE LANCASHIRE COUNTY COUNCIL.

## ARCHITECT'S DEPARTMENT.

EXPERIENCED and qualified ARCHITECTS with a flair for design are invited to apply for vacant positions, with commencing salaries of £685 rising to £760 per annum, to assist on a school building programme which includes technical colleges.

Application forms obtainable from the County Architect, County Offices, Preston, to be returned by the 16th September, 1950. 14715

## COUNTY BOROUGH OF NORTHAMPTON.

## BOROUGH ARCHITECT'S DEPARTMENT.

APPLICATIONS for the following appointments, stating age, qualifications and experience, past and present appointments and salary, whether related to any member or senior officer of the Council and giving names of two persons to whom reference can be made, should be delivered to J. L. Womersley, A.R.I.B.A., A.M.T.P.I., Borough Architect and Town Planning Officer, Guildhall, Northampton, not later than 21st August, 1950.

(a) ASSISTANT ARCHITECT (Permanent).

Grade V A.P.T. (£520-£570).

Applicants must be Registered Architects and should have sound design ability and be experienced in the preparation of working drawings and estimates. The successful applicant will be engaged in the Education and General Section of the Department and preference will be given to applicants having experience in educational work.

(b) TWO TEMPORARY CLERKS OF WORKS.

Grades A.P.T. III-IV (£450-£525).

(c) TEMPORARY ASSISTANT CLERK OF WORKS. Grade A.P.T. III (£450-£495).

The appointments may be made permanent on satisfactory service being given.

Applicants should have a thorough practical knowledge of the building trade, have experience of supervision of works in progress, and should preferably have had early training as a craftsman. For (b) one of the two successful applicants will be required to supervise the construction of houses and flats and the other schools only. The successful applicant for (c) will be required to assist a Clerk of Works in both schools and housing projects.

The appointment for which application is being made should be clearly stated.

Canvassing will be disqualifying.

C. E. VIVIAN ROWE, Town Clerk. 14724

## VIEWSLEY AND WEST DRAYTON URBAN DISTRICT COUNCIL.

## ARCHITECTURAL ASSISTANT.

APPLICATIONS are invited for the established appointment of ARCHITECTURAL ASSISTANT, salary A.P.T. Grade V (£520-£570, plus £10 London Weighing).

Candidates must be Registered Architects, and preference will be given to applicants possessing experience in housing and general municipal work.

The appointment will be subject to the National Scheme of Conditions of Service, the provisions of the Local Government Superannuation Act, 1937, and to one month's notice on either side, and the successful candidate will be required to pass a medical examination. It is a condition of service that the person appointed shall be, or shall become as soon as possible after commencing duty, a member of a Trade Union, Professional Organisation or other recognised negotiating body.

Housing accommodation will, if necessary, be provided and candidates should state in their applications if this is required.

Applications, on forms to be obtained from the Engineer, Surveyor and Architect, together with the names and addresses of two referees, and endorsed "Architectural Assistant," are to be returned not later than Saturday the 26th August, 1950.

A. KENNEDY, Clerk of the Council.

Council Offices, Viewsley, Middlesbrough. 14736

## AYCLIFFE DEVELOPMENT CORPORATION (Established under the New Towns Act, 1946).

## APPOINTMENT OF ASSISTANT ARCHITECTS.

THE above Corporation invite applications from ARCHITECTS for appointment on the staff of their Chief Architect, Mr. G. A. Goldstraw, B.A., A.R.I.B.A., at salaries in accordance with Grades A.P.T. V and A.P.T. VII of the National Joint Council for Local Authorities, Administrative, Professional and Technical Services, i.e. £520 rising to £570, and £635 rising to £710 respectively.

Where necessary, housing accommodation will be available.

Applications, stating qualifications, previous experience, present appointment, salary, age, and the Grade applied for, must be forwarded to the undersigned not later than 6th August, 1950.

The applicant should include the names and addresses of three persons to whom personal reference can be made if necessary.

(Signed) A. W. THOMAS, General Manager, Newton Aycliffe Co. Durham.

2nd August, 1950. 14711

URBAN DISTRICT COUNCIL OF  
LONGBENTON.APPOINTMENT OF ARCHITECTURAL  
ASSISTANT.

APPLICATIONS are invited from Registered Architects, preferably Associates of the R.I.B.A., for the above appointment in the Engineer and Surveyor's Department. Applicants must have had considerable experience in design and construction, particularly in relation to housing.

The salary will be in accordance with A.P.T. Grade V of the National Salary Scales, i.e., £520 rising to £570 per annum.

The appointment is terminable by one month's notice on either side and is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

Applications, endorsed "Architectural Assistant," stating age, qualifications, with full details of training and experience, and accompanied by copies of two recent testimonials, must be received by the undersigned not later than the 23rd August, 1950.

Candidates must declare in writing whether they are related to any member or senior officer of the Council, and canvassing directly or indirectly will disqualify.

G. HARRISON, Clerk of the Council.  
Council Offices, Forest Hall.  
July, 1950. [4710]

## SALOP COUNTY COUNCIL.

## COUNTY ARCHITECT'S DEPARTMENT.

APPLICATIONS are invited for the following appointments to established posts in the Department—

1. ASSISTANT ARCHITECTS, A.P.T. Grades III-IV. Salary £450 to £525 per annum.
2. ASSISTANT ARCHITECTS, A.P.T. Grades II-III. Salary £420 to £495 per annum.
3. JUNIOR ASSISTANT ARCHITECT, A.P.T. Grades I-III. Salary £390 to £465 per annum.
4. ASSISTANT QUANTITY SURVEYOR, A.P.T. Grades II-III. Salary £420 to £495 per annum.

The appointments will be subject to one month's notice in writing on either side, to the terms of the National Joint Council's Scheme of Conditions of Service, and to the provisions of the Local Government Superannuation Act, 1937. The successful applicants will be required to pass a medical examination.

Application forms may be obtained from the County Architect, A. G. CHANT, F.R.I.B.A., Column House, London Road, Shrewsbury, to whom they must be returned, accompanied by copies of not more than three recent testimonials, not later than Tuesday, 29th August, 1950.

G. C. GODDER, Clerk of the Council.  
Shrewsbury.  
August, 1950. [4738]

## LONDON COUNTY COUNCIL.

APPLICATIONS are invited for positions of ARCHITECTURAL ASSISTANT (salaries up to £580 a year) in the Housing and Valuation Department. Commencing salaries will be determined according to qualifications and experience. Engagement will be subject to the Local Government Superannuation Act, and successful candidates will be eligible for consideration for appointment to the permanent staff on the occurrence of vacancies.

Successful candidates will be required to assist in the design, layout and preparation of working drawings for housing schemes (cottages and multi-story flats) and will be employed in the Housing Architect's Division.

Forms of application may be obtained from the Director of Housing, The County Hall, Westminster Bridge, S.E.1 (stamped addressed envelope required and quote reference A.A.1). Canvassing disqualifies. (1016) 10101

AIR MINISTRY have vacancies for DESIGNERS- DRAUGHTSMEN in the Design Branch of the Works Department for high class work in the following fields: Architecture, Drainage and Water Supply, Land Survey. The work includes design for London Airport. Salaries are on ranges up to £750. Starting pay according to age and qualifications.—Applications, stating age, qualifications, previous appointments and salary required, should be sent to Air Ministry, S.2 (b), Cornwall House, London, S.E.1. It is regretted that applications of candidates not called for interview cannot be acknowledged. [4722]

## BOROUGH OF JARROW.

## BOROUGH ENGINEER'S DEPARTMENT.

APPOINTMENT OF ARCHITECTURAL  
ASSISTANT, GRADE IV.

APPLICATIONS are invited for the appointment of ARCHITECTURAL ASSISTANT, A.P.T. IV (£480-£525). Applicants must have an approved Architectural qualification and sound experience, particularly in Housing.

The successful applicant will be required to pass a medical examination. Applications in plain envelopes, endorsed "Architectural Assistant," stating age, present and previous appointment, and experience, together with the names and addresses of three persons to whom reference as to ability and character can be made, to be received by the undersigned on or before the 26th August, 1950.

Canvassing directly or indirectly will disqualify, and applicants must state whether or not they are related to any member of, or the holder of any senior office, under the Council.

The Council is prepared, if a successful applicant requires it, to let him have the tenancy of one of the Council's houses.

IAN R. SCUTT, Town Clerk.

Town Hall,  
Jarrow, Co. Durham.  
1st August, 1950. [4719]

## KENT COUNTY COUNCIL.

## BUILDINGS DEPARTMENT.

APPLICATIONS are invited for an appointment in the Buildings Department of an ARCHITECTURAL ASSISTANT at a salary within the range A.P.T. Grade II-III (£420-£495).

Candidates must have passed the Intermediate Examination of the Royal Institute of British Architects and have had some experience in the preparation of working drawings and development of detail drawings.

The commencing grade and salary will be dependent upon the experience of the successful candidate.

The post is superannuable and the successful candidate will be required to pass a medical examination.

Applications, on forms obtainable from the County Architect, Springfield, Maidstone, should be delivered to him within two weeks of the appearance of this advertisement.

W. L. PLATTS, Clerk of the County Council.  
County Hall, Maidstone.  
31st July, 1950. [4729]

## HARRIS INSTITUTE, PRESTON.

LECTURER is required for the above College. The successful applicant will be required to teach classes giving preparation for Intermediate and Final R.I.B.A. National Certificates in Building and Civil Engineering. Industrial experience is essential.

The salary will be in accordance with the Burnham Technical Scale, plus a Special Responsibility Allowance of £150 per annum. Forms of application and further particulars may be obtained from the Principal, Technical College, Corporation Street, Preston, to whom completed forms should be returned within two weeks from the appearance of this advertisement.

T. M. NAYLOR, Principal. [4715]

## LONDON COUNTY COUNCIL.

## ARCHITECT'S DEPARTMENT.

## BUILDING SURVEYORS.

APPLICATIONS are invited for the following positions in the Architect's Department—  
SURVEYOR, Grade II—£700 x £35 = £840.  
SURVEYOR, Grade III—£550 x £25 = £700.  
TECHNICAL ASSISTANT—Up to £580.

Candidates should be capable of making surveys and preparing plans of factories, formulating requirements for satisfactory means of escape and negotiating with factory occupiers. The Grade II Surveyor, who should be a qualified architect or surveyor, will be in immediate charge of this work.

Commencing salaries of Grade III Surveyors and Technical Assistants will be assessed after interview. All positions superannuable. Application forms from the Architect (AR/EC/BA), County Hall, S.E.1, enclosing stamped addressed foolscap envelope.

Canvassing disqualifies. (1002). [4698]

## HUNTINGDONSHIRE COUNTY COUNCIL.

## COUNTY ARCHITECT'S DEPARTMENT.

ARCHITECTURAL ASSISTANT,  
GRADE III A.P.T.

APPLICATIONS are invited for the appointment of an ARCHITECTURAL ASSISTANT, salary Grade III A.P.T., £450 x £15 to £495 per annum.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937.

Applications should be submitted to S. J. HANDS, A.R.I.B.A., County Architect, County Buildings, Huntingdon, by not later than Monday, 21st August, 1950, with copies of two recent testimonials or the names of two referees.

JOHN KELLY, Clerk of the County Council.  
County Buildings, Huntingdon.  
10th August, 1950. [4728]

## BURGH OF MUSELBURGH.

APPLICATIONS are invited for the post of JUNIOR ASSISTANT in the Architectural Department of the Burgh Surveyor's Office, Musselburgh. Salary £225 p.a. (at 21) rising to £370 p.a.—Applications, stating age and experience, to be lodged with the Burgh Surveyor not later than 25th August.

[4727]

## DENBIGHSHIRE COUNTY COUNCIL.

## COUNTY ARCHITECT'S DEPARTMENT.

THE above County Council invites applications for the under-mentioned appointments in the County Architect's Department, Wrexham, viz.—

(a) 1 ASSISTANT ARCHITECT—A.P.T. Division, Grade VI. Salary £595-£660 per annum. Preference will be given to Associates of R.I.B.A.

Applicants must have had a thorough training in architectural design and construction of Modern School buildings, and other works carried out by Local Authorities.

(b) 1 ASSISTANT ARCHITECT—A.P.T. Division, Grade V. Salary £520-£570 per annum. Preference will be given to Members of the R.I.B.A., or Registered Architects. Applicants must have had sound experience in architectural design and in the preparation of working drawings, with full understanding of Modern School construction.

(c) 2 JUNIOR ASSISTANT ARCHITECTS—A.P.T. Division, Grade III. Salary £450-£495 per annum.

Preference will be given to applicants who have passed the Intermediate R.I.B.A. Examination. Applicants must be capable of preparing working drawings and details for modern buildings.

(d) 1 SPECIFICATION WRITER—A.P.T. Division, Grade IV. Salary £460-£525 per annum.

Applicants for post (d) must have had Architectural and Quantity Surveying experience and possess a thorough knowledge of current Building Practice and Materials. They must be fully capable of preparing detailed Specifications for Building and Painting Works of all descriptions in connection with County Council properties, and be able to prepare inquiries and deal with Provisional Sum Items in connection with new building projects. The successful applicants will also be required to assist generally in the Quantity Surveyor's Department.

The appointments will be subject to termination of one month's notice in writing on either side, and also to the provisions of Local Government Superannuation Act, 1937. The successful applicants will be required to pass a medical examination and to reside in such place in the County as the County Council may direct.

Applications, giving age, qualifications and particulars of present and previous appointments, and accompanied by copies of three recent testimonials, to be sent to me, the undersigned, in a sealed envelope, endorsed with a description of the post applied for, by not later than the 31st day of August, 1950.

W. E. BUFTON, Clerk of the County Council.  
County Offices, Ruthin.  
4th August, 1950. [4746]

## BUSINESS FOR SALE.

UNIQUE opportunity occurs to start building operations in Channel Islands. Well-established Co. £2,000 stock, £1,500 plant, 12 building plots. Office. All necessary licences, etc. All in at £10,000.—Box 5849. The Architect and Building News. [4712]

## ARCHITECTURAL APPOINTMENTS VACANT

**A**PPPLICATIONS are invited for positions as **ASSISTANT ARCHITECTS** in an Architect's Office of the Civil Engineer's Department, British Railways, located in London. Assistants will be engaged on large Station Reconstruction Schemes and should be A.R.I.B.A. or hold an equivalent qualification. The salary offered is up to £550 per annum dependent on qualification and experience. The posts are temporary.—Apply, stating age, qualifications and experience to Box 5774, The Architect and Building News. 14722

**A**RGUMENTATIVE Assistant required for work in Central and Greater London. Final R.I.B.A. standard desirable. High salary according to ability and experience. Five-day week.—Apply Box 5893, The Architect and Building News. 14744

**J. DOUGLASS** Mathews & Partners, Chartered Architects, 1 Ebury Street, London, S.W.1, require Senior Qualified Assistant with administrative experience. Preference for war ex-Serviceman (R.I.B.A. scale of salary). 14742

## SITUATIONS VACANT

**A**RGUMENTATIVE Metal Workers require a Designer-Draftsman of considerable merit. Top salary position for skilled man.—Apply The Morris Singer Company, Hope House, Gt. Peter Street, Westminster, S.W.1. 10095

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**E**STIMATOR required for Architectural Dept. of leading London Wholesale Ironmongers. A sound trade knowledge backed by practical experience is essential. Opportunities for advancement.—Write Box 5883, The Architect and Building News. 14741

**E**XPERIENCED Surveyor required for the survey and profiling on overhead power lines in England and Scotland. Salary in accordance with qualifications.—Apply Riley & Neate Limited, Houghton Road, Darlington. 14743

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### COUNTY OF LINCOLN—PARTS OF LINDSEY

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**C**ONTRACTORS desirous of tendering for the above Houses should submit their names to the Architects, Messrs. Charles B. Pearson & Son, F.R.I.B.A., 18 Dalton Square, Lancaster, not later than Wednesday, 10th August, 1950. Bills of Quantities and Specification will be sent to intending tenderers. Plans may be seen at my office during normal working hours, or at the offices of the Architects, or the Clerk of Works' Office on the site.

The acceptance of any tender is subject to the approval of the Home Office and the Council do not bind themselves to accept the lowest or any tender.

HERBERT COPLAND, Clerk of the Council, County Offices, Lincoln. 14730

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Euston Station, London. Built 1838

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Unfortunately, though this was a period rich in technical advancement, the aesthetic properties of many of its great achievements were striking examples of how *not* to do it.

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